Food Packer

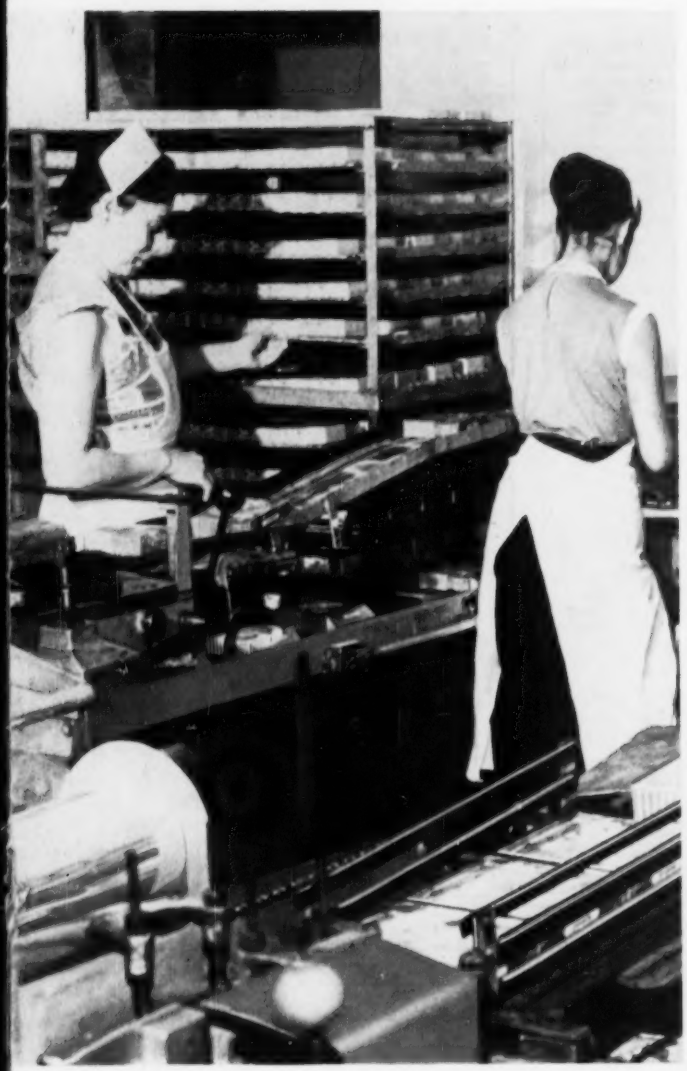
The National Magazine of Production and Management

CANNING GLASSPACKING FREEZING

A Vance Publication

September, 1957

Man of the Month
Zoltan Imre Kertesz



National Tastes Mean Markets – Page 26

New Plant: Only Potato Salad – Page 20

Tomato Canner Adds Snap Beans – Page 17

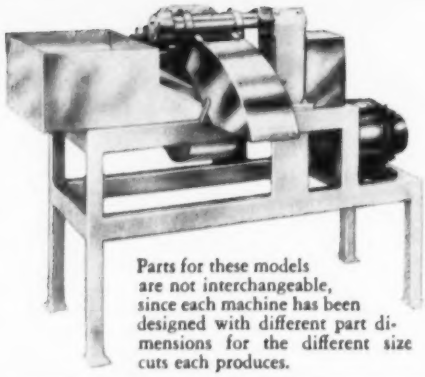
Cut Costs in Canning Corn – Page 15

Quality Control Clinic – Freezing News – Market Place

URSCHEL

Models F, G, H *and* GK ... *are* 4 *Separate Cutting Units!*

They all look alike...all operate alike



Parts for these models are not interchangeable, since each machine has been designed with different part dimensions for the different size cuts each produces.

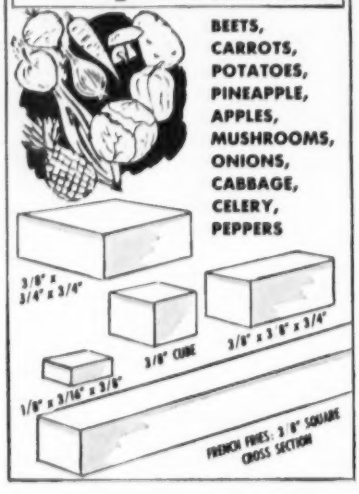
...but each produces a different range of cut sizes!

The product to be diced is fed first to the inside of a slicing shell, where it is then rotated by an impeller at high speed. Centrifugal force causes product to slide around the inside surface of slicing shell. As product approaches top of this shell it slides over an adjustable slicing gate which controls slice thickness. Slicing knife is at top of slicing shell. At the instant of slice, cross cut knives ride down, cutting slice crosswise into strips, or french fry cuts. These knives throw the product into the revolving circular knives that cut the strips into cubes.

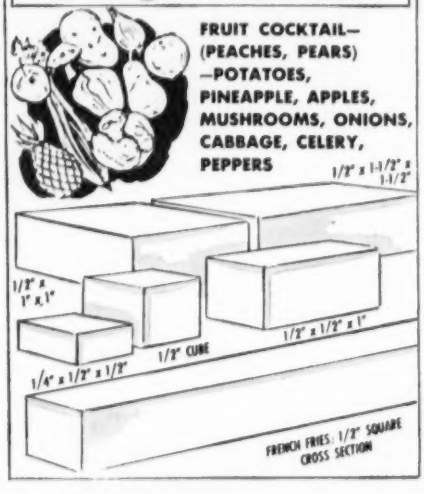
This new cutting principle has many advantages over previous methods. When slicing any product with a knife, the product tends to crack parallel with the knife's edge, particularly in brittle, root vegetables. Product cracking is overcome by cutting parallel with the strains set up, thus eliminating strains and the resultant cracking.

Product damage is eliminated by moving the product in a straight line from the time the first cut is made until the last cut is made, which reduces impact and crushing, and makes possible the high operating speed and quality of cut produced.

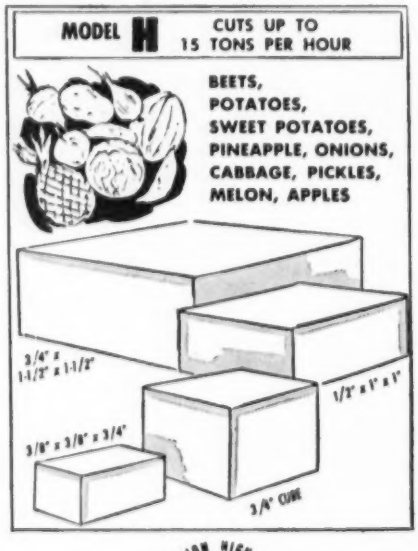
MODEL F — CUTS UP TO 9 TONS PER HOUR


BEETS, CARROTS, POTATOES, PINEAPPLE, APPLES, MUSHROOMS, ONIONS, CABBAGE, CELERY, PEPPERS
3/8" x 3/4" x 3/4"
3/8" CUBE
3/8" x 3/8" x 3/4"
1/8" x 3/16" x 3/8"
FRENCH FRIES: 3/8" SQUARE CROSS SECTION

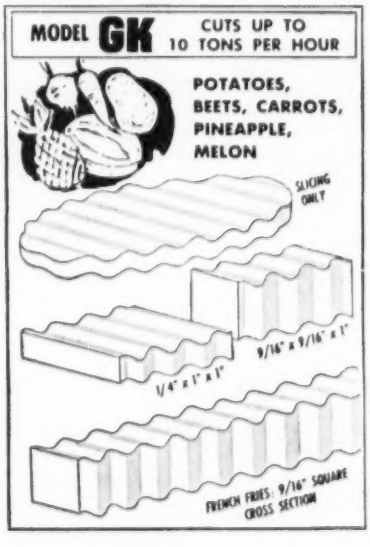
MODEL G — CUTS UP TO 11 TONS PER HOUR


FRUIT COCKTAIL— (PEACHES, PEARS) —POTATOES, PINEAPPLE, APPLES, MUSHROOMS, ONIONS, CABBAGE, CELERY, PEPPERS
1/2" x 1-1/2" x 1-1/2"
1/2" x 1" x 1"
1/2" CUBE
1/2" x 1/2" x 1"
1/4" x 1/2" x 1/2"
FRENCH FRIES: 1/2" SQUARE CROSS SECTION

MODEL H — CUTS UP TO 15 TONS PER HOUR



MODEL GK — CUTS UP TO 10 TONS PER HOUR



PRECISION HIGH SPEED FOOD CUTTING EQUIPMENT

URSCHEL LABORATORIES INC.
VALPARAISO, INDIANA

Designers and manufacturers of precision, high speed cutting equipment for food products

Announcing the merger of

AMERICAN CAN COMPANY

and **DIXIE CUP COMPANY**

—a move that promises better service to all !

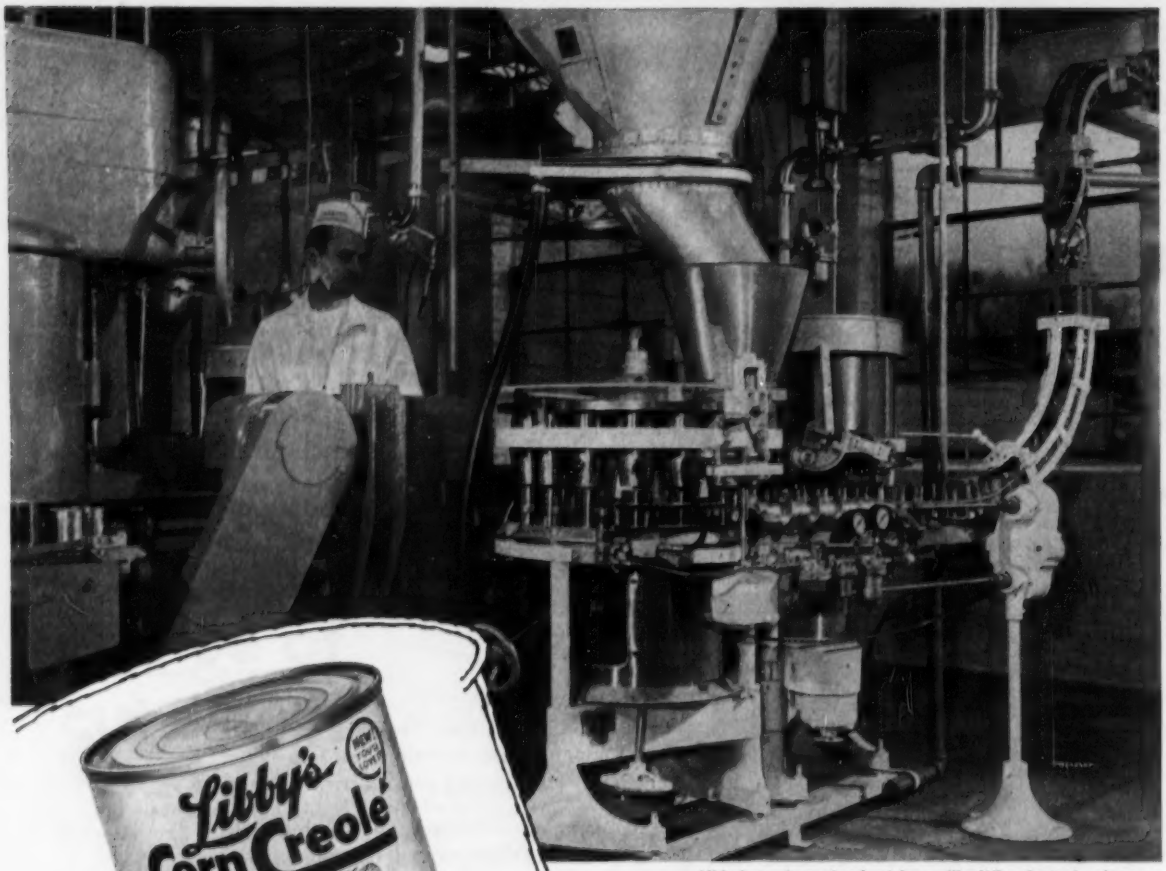
Recently, American Can Company and Dixie Cup Company were formally joined to better serve both industry and the American public.

By combining research and manufacturing facilities, Canco and Dixie Cup will be able to devise even better, more convenient products. By uniting management and marketing staffs, these two corporations will be able to offer more efficient, more complete sales and technical service.

In the months and years to come, you can fully expect that *your* industry, and those it serves, will benefit from this merger!

CANCO

DIXIE CUP



Libby's newly modernized Janesville, Wis. plant, showing one of a battery of FMC 15 Station Fillers.

Libby's New "Man-Style" Corn— Packed to Perfection on FMC FILLERS

With its separate product and briner units, the versatile FMC 15 Station Filler is actually two fillers in one. Because of its unmatched accuracy at high speeds, you'll see it going into new and modernized operations wherever granular products such as whole grain corn, peas, beans and the like are packed in brine or sauce.

Many design and mechanical refinements make the new 15 Station Filler more efficient than ever. Spillage and waste of product and brine are virtually eliminated by the FMC "No Can—No Fill" mechanism, the banked can track, smooth feed, tangential transfer and easy take-off.

Specifications and full information are contained in new "FMC Facts" Bulletin, Vol. 4 No. 4. Write for free copy today, or contact your nearest FMC representative.

. . . EVERY CAN PRECISION FILLED

Simple in design, machined throughout to close tolerances, the FMC two-position pre-measuring briner valves are composed of only three parts. With movable slide up, measuring tube is filled. In the down position, the accurately measured liquid is released directly into the can.

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

Food Packer

September 1957

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Events to Come

Sept. 8-11. National Frozen Food Merchandising Convention and Exposition, Hotel Sherman, Chicago, Ill.

Sept. 29-30, Oct. 1-2. Packaging Machinery Manufacturers Institute, 3rd annual meeting, the Cloister, Sea Island, Ga.

Oct. 10-12. Florida Canners Assn., 26th annual meeting, Americana Hotel, Bal Harbour, Fla.

Oct. 14-16. Sanitation Maintenance Show and Conference, Navy Pier, Chicago, Ill.

Nov. 4-5. Iowa-Nebraska Canners Assn., Fall meeting, Hotel Ft. Des Moines, Des Moines, Ia.

Nov. 7. Illinois Canners Assn., Fall meeting, LaSalle Hotel, Chicago, Ill.

Nov. 11. Tennessee-Kentucky Canners Assn., annual convention University of Tennessee, Knoxville, Tenn.

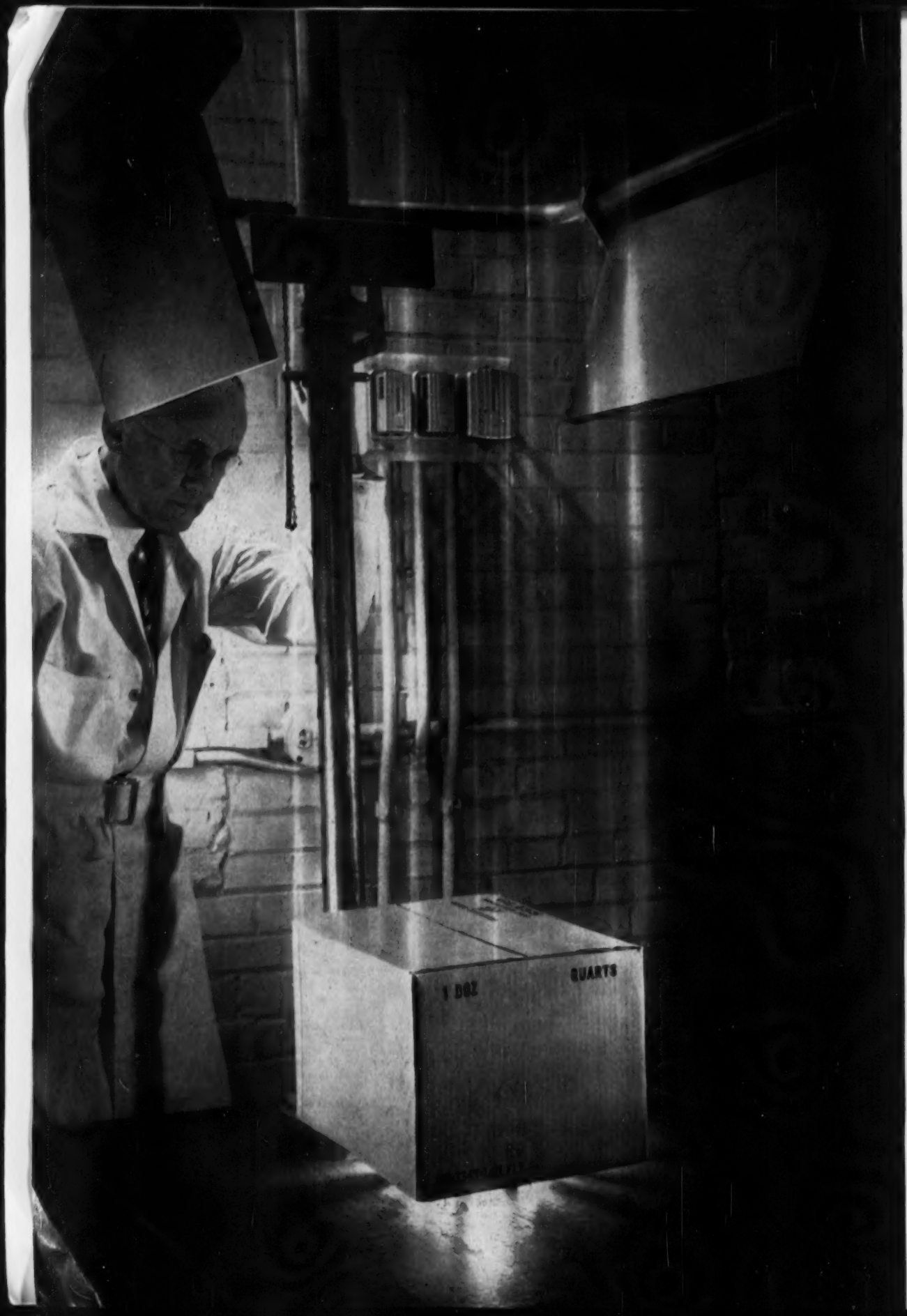
Nov. 11-12. Wisconsin Canners Assn., 53rd annual convention, Schroeder Hotel, Milwaukee, Wis.

Nov. 20-22. Indiana Canners Assn., annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.

Nov. 21-22. Michigan Canners & Freezers Assn., Fall meeting, Pantlind Hotel, Grand Rapids, Mich.

Nov. 24-25. Pennsylvania Canners Assn., Yorktowne Hotel, York, Pa.

Vol. 38, No. 9 FOOD PACKER (formerly Canning Age.) Title registered in U. S. Patent Office. Copyright, 1957, Vance Publishing Corporation.
Office of publication: 1309 N. Main St., Pontiac, Ill. Executive and editorial offices: 139 N. Clark St., Chicago 2, Ill. Telephone: FInancial 6-5380.
Subscription rates: U. S. and possessions, Canada, $3.00 per year; two years, $5.00; three years, $7.00; other countries, $10.00 per year. Single copies, 25 cents each. Copies of issues prior to current year, if available, $1 each.
Entered as second class matter, August 2, 1952, at the Post Office, Pontiac, Illinois, under the Act of March 3, 1879. FOOD PACKER is published monthly except in October when published semi-monthly (including the Buyers' Guide and Reference Issue published in October) by Vance Publishing Corporation. Herbert A. Vance, President and Treasurer; A. A. Hood, Vice President; A. E. Monetti, Secretary. Also publishers of American Lumberman, Wood & Wood Products, and Home Maintenance & Improvement.


1 DOZ
QUARTS

smash hit!

. . . simulating the tough treatment your glass-packed product encounters in its obstacle race to market

Zwiff—Bam! And a packed shipping carton meets another rigid test in the Ball Brothers Packaging Research Laboratory. The drop test shown here measures the ability of packed cartons to withstand repeated free falls from specified heights . . . on top, bottom, sides, ends, edges, and corners . . . without damaging the glass-packed product within. Ball makes many other laboratory and field tests to be sure that cartons which protect Ball glass containers will withstand "manhandling," machine and transport punishment while delivering your product safely . . . economically, too. Ball packaging experts can help you avoid the costly waste of underpacking or overpacking; can help you get more for your packaging dollar. Your packaging should meet product requirements "on the button." It *will* if it's by Ball.

Call Ball first for glass containers and metal closures to glamorize your product — protect its quality. Whether your requirements call for stock items or private molds, for plain or decorated closures, Ball Packaging Counselors will assist you in developing the package which will best fit your needs. Get in touch with your nearest Ball representative.

call Ball *first*

for the finest Glass Containers / Metal Closures / Complete Packaging Counsel

BALL BROTHERS COMPANY, INC., Muncie, Indiana; Okmulgee, Oklahoma, El Monte, California. Represented in major cities throughout the United States.

Industry

Names and News

Earl Page

H. L. Seaton

Earl M. Page is the newly elected president of the American Seed Trade Association. Mr. Page is president of Corneli Seed Co.

H. Lyle Seaton is appointed agriculturist for the Pacific Division of Continental Can Co. in the Metal Operations Group. Mr. Seaton will devote full time to crop production activities with the field departments of Continental customers in the Pacific Coast production areas.

H. P. Cannon & Sons, Inc., Hanover, Pa., has purchased the plant and equipment of the L. A. Covell Co., Inc., Marydel, Del. It will be operated as a division of H. P. Cannon.

Charles F. Cook, student at Oregon State College has been named winner of the **Northwest Canners and Freezers Association's** third annual award. Cook, selected as an outstanding junior in Food Technology, will receive $100, and have his name inscribed on a plaque which is permanently on display in the Food Technology Building.

Lord-Mott Co., Inc. has appointed the **Craig Brokerage Co.** of Indianapolis exclusive representative in the Indianapolis area for the canner's complete line of canned vegetables.

Axel E. Strand, comptroller, Libby, McNeill & Libby, Chicago, has been elected to membership in the Controllers Institute of America.

Wholly owned subsidiaries of the Mead Corporation have changed names. The **Atlanta Paper Co.,** of Atlanta, Ga. now is the Mead-Atlantic Paper Co., and **The Jackson Box Co.,** Mead Containers, Inc.

Lyle Clark, Vice President in charge of Brooks Foods, Inc. in Indiana, died as a result of a plane crash.

Gallatin Valley Seed Co., announces the election of B. C. Parker as president, and H. B. Schlagenhauf, vice president and treasurer.

Lloyd H. Larison, associate general traffic manager of Hawaiian Pineapple Co., is retiring after 46 years of service. He was active both on the mainland and in Hawaii.

Carl Pederson

Kenneth Baker

Dr. Carl Pedersen of the New York State Agriculture Experiment Station, Geneva, N.Y., was honored recently for his research work on sauerkraut. He received a plaque at the 50 anniversary meeting of the Kraut Packers Association, Port Clinton, Ohio.

Kenneth Baker is the new advertising director of Gerber Products Co. He is responsible for sales promotion, consumer services, and export operations, and direct mail programs.

Lloyd C. Mitchell of the Food and Drug Administration will receive the first annual Harvey W. Wiley Award of the Association of Official Agricultural Chemists. The award consists of $500, and goes to the scientist for his outstanding contribution to the development of analysis methods.

Robert C. Webster, formerly a research engineer at the Continental Can Co. Metal Research and Development Laboratories, Chicago, was recently appointed general manager of the Pressurized Food Division, Western Filling Corp., Los Angeles, which has been formed for custom packaging of food type products.

L. W. Corbett is new manager of Northrup, King & Co.'s, garden seed department, succeeding J. W. Mathys. Mr. Mathys retired as of July 1st.

New officers of the Refrigeration Research Foundation are: **Dr. S. C. Prescott,** chairman board of governors; **E. M. Dodds,** vice president; **Garth A. Shoemaker,** president; **Dr. William A. Schoenfeld,** associate chairman of the board; **Gilbert J. Stecker,** treasurer, assistant secretary; **Mack Hunt,** assistant treasurer, and **H. C. Diehl,** secretary and director.

National Food Brokers Association has announced the following new members: **Stewart Sales Co.,** 1395 Grandview Ave., Columbus 12, Ohio; **Allaire Sales Co.,** 1362 Kenmore Ave., Buffalo 23, N. Y.; **A. Thomas Farris & Son,** State Tower Bldg., Syracuse, N. Y.; **T. A. Wallace Co.,** 101 N. 33rd St., Philadelphia, Pa.; **Clarke Wilson Co.,** 2201 Grand Ave., Kansas City, Mo.

International Salt Co., opened a new Memphis district sales office. Under the direction of **John H. Talley** this new office will be responsible for all of Arkansas, the northern half of Mississippi and the western half of Tennessee.

Coastal Foods, division of Consolidated Foods, is moving its Gibb's label production from the Baltimore plant to Maryland, Mass. The sales office will stay in Baltimore.

Donald Mundale

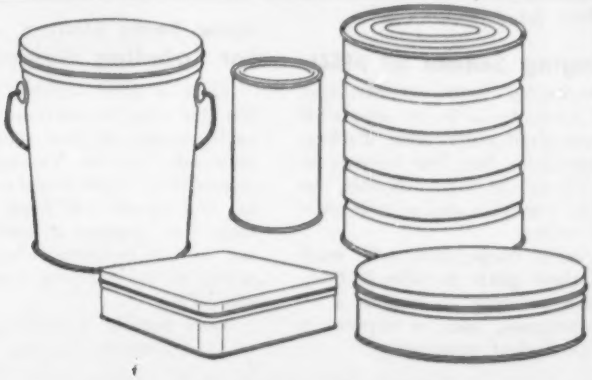
Clair F. Shillito

Donald O. Mundale is the new technical service representative for Oakite Products Inc., at Marion, Ohio. James E. Davenport has been assigned as representative to Rocky Mount, North Carolina office.

Clair F. Shillito was elected to the board and appointed general manager of the C. H. Musselman Co., G. A. Slaybaugh was also elected to the board of directors.

Tylor Wrightson, partner of Charles T. Wrightson & Son, Inc., Easton, Md., died of a stroke June 7.

John L. Carnie, general manager of the Can Division of Crown Cork & Seal Co., announced the promotion of **Edward P. Stuart,** to division manager of sales.



Do you feel close enough to your metal package supplier . . . is he a part of your organization, thinking for you, planning for you, working for you? Your success is of utmost importance to us. Your continuation of business with Heekin is the goal of everyone in the Heekin organization.

HEEKIN
Product Planned
CANS

THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*

Spotlighting the NEWS

Dr. Pedersen Offers 5 Point Plan for Improving Kraut

Dr. Carl Pederson, who was honored by the National Kraut Packers Association at its 50th anniversary meeting, July 19, noted that most of the research on the product has been done within the past 30 years.

The description of sauerkraut by Dr. Lind in the 17th century was not greatly improved by further studies until 1928 at the University of Wisconsin. Since then there has been rapid progress.

Dr. Pederson said, "There is much to be done. However, I would like to suggest outstanding changes in manufacturing in the industry which have brought about the improved quality in kraut." His list included:

1. Better strains of cabbage.
2. Better control of fermentation through knowledge of temperature effects, control of salt concentration and determination of acidity.
3. Improved canning and storage methods.
4. Covering kraut and general sanitation.
5. Increased knowledge in the industry as to what constitutes good kraut.

NARGUS Asks Price Spots

Recommendations for price spots on food packages have been made by the National Association of Retail Grocers.

1. The spot should be 1 in. in diameter.
2. When the package (canned food for example) is packed in a single layer in the shipping case, price spots should be on top center. When cases hold a double layer, spots are on top and bottom. If the case is opened by zipper method and top layer is upside down, the spots should be on tops only.
3. Cases with three or four layers should have spots on both top and bottom of the package.
4. Cases should have instructions for opening printed legibly on the outside. Price spots on packages should be visible immediately on opening the case.

NCA Convention Will Start on Monday

The tentative schedule for the next convention of the National Canners Association, Atlantic City, Jan. 20-23, has a slightly different format.

The preliminary events, including the board of directors meeting, the administrative council meeting, and committee meetings, will be handled on Saturday and Sunday, instead, as traditionally on Thursday and Friday. The opening of the convention proper will take place on Monday morning, Jan. 20.

The final session will be on Thursday morning, which has been reserved for a technical session.

Potato Study Started

The potato processing industry is taking enough potatoes from the fresh market to change growing practices, selling and buying methods. To study these changes, the University of Idaho will conduct a research program in cooperation with the U.S. Department of Agriculture.

The study is intended to find what the demand for the processed potatoes does to consumer prices for the fresh market, what the future demand is likely to be at specific price ratios, what new markets will develop for the processing potatoes, and how they will affect the demand.

Packaging School at MSU

A packaging course at Michigan State University is to be supported by a non-profit corporation, Packaging Foundation, Inc. The trustees include three M.S.U. officials, an industrial executive and a trade publication editor.

The new corporation will work toward three goals: to raise $2,000,000 for a building, to support a research program, and to support a graduate student program.

Dr. Alexis J. Panshin, head of the department of forest products at Michigan State is the director of the new School of Packaging. The packaging program has been one of five curriculums under the department of forest products.

Indiana Association Moves Office

Warren Spangle, secretary of the Indiana Canners Association, announced that the offices of the association would be moved to Indianapolis, Ind. in August. The new address is Indiana Canners Association, Inc., 2120 North Meridan St., Restaurant Association Building, Indianapolis 2, Ind.

Mr. Spangle will also serve as assistant executive secretary of the Restaurant Association.

Mr. Spangle said, "The new program will advance the objectives of the Association through the reallocation of the monies saved by the economies of the move."

New 'Canning Industry'

The National Canners Association has released a new edition of its booklet "The Canning Industry." The third edition brings the data up to date and adds new features.

The booklet, is intended for use by NCA members, press, radio and TV as a source of general information about canning.

New Tests Slated for Labeling Guides

Tests of three vegetables will begin this year to determine limits for each category of label statement recommended by the National Canners Association. Whole kernel corn, pumpkin and squash will begin the usual three year program of testing, according to the technical advisory committee of the Labeling Committee of the NCA.

Taste tests by a trained panel will

(*Continued on Page 38*)

Is your wagon inside?

Sucaryl® on your label

pre-sells your dietetic line

far above and beyon

any other calorie-free sweetener

For
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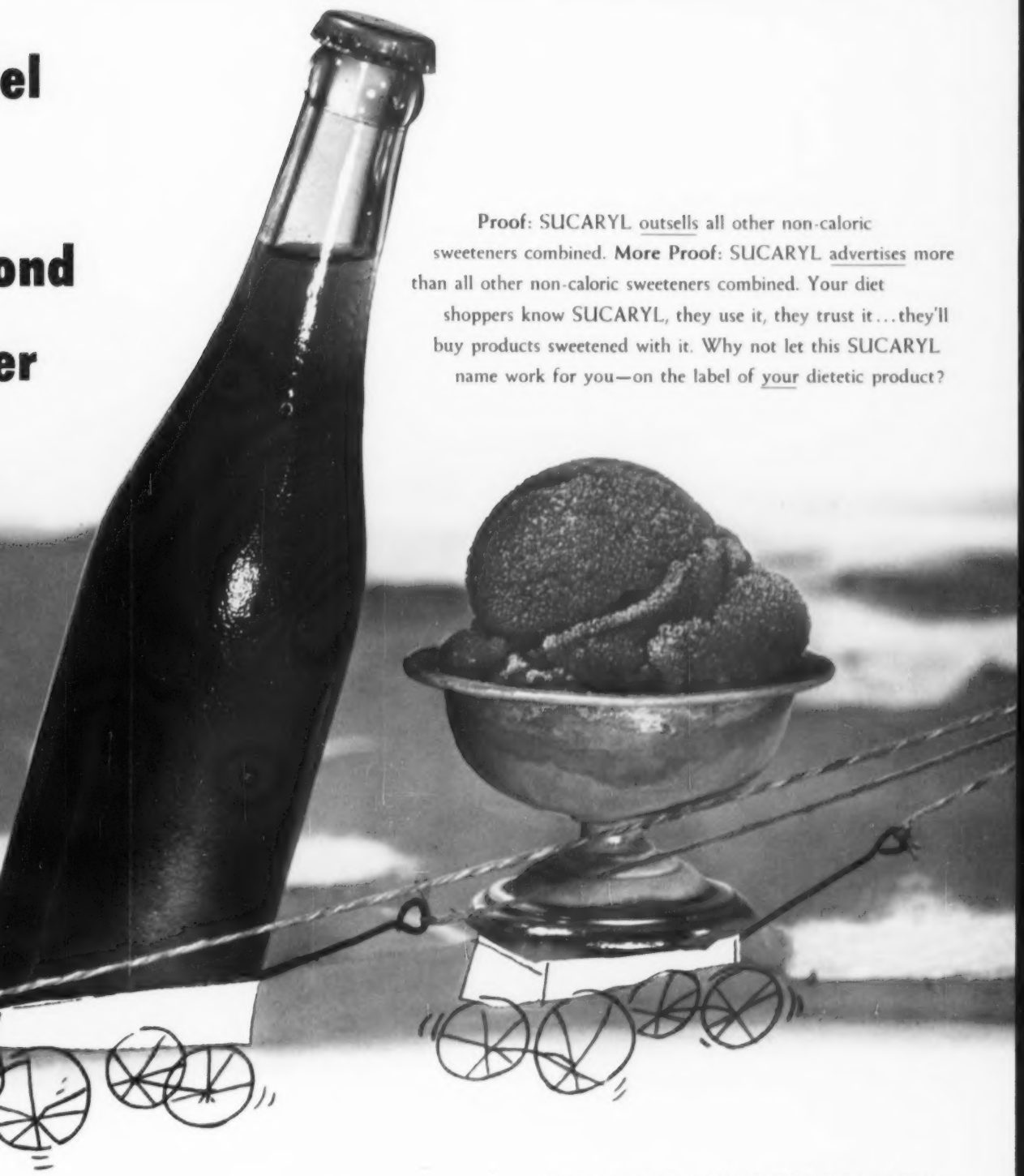


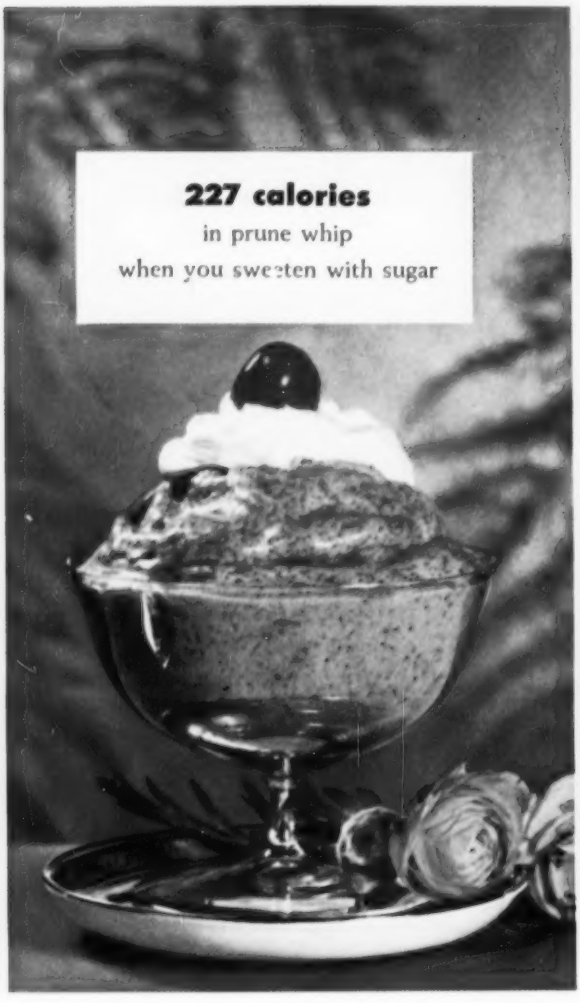
Proof: SUCARYL outsells all other non-caloric sweeteners combined. **More Proof**: SUCARYL advertises more than all other non-caloric sweeteners combined. Your diet shoppers know SUCARYL, they use it, they trust it... they'll buy products sweetened with it. Why not let this SUCARYL name work for you—on the label of your dietetic product?

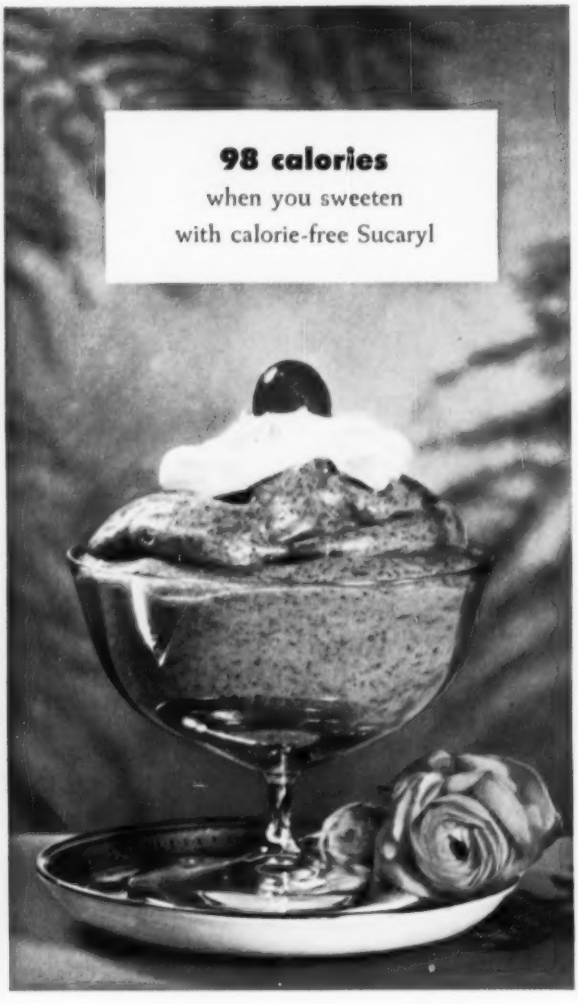
For complete information about Sucaryl and it's usefulness to you, we suggest you write for a copy of our booklet, "Making The Most Of The Dietetic Market With Sucaryl." Please address Abbott Laboratories, North Chicago, Illinois. On request, we will also send you a sufficient supply of Sucaryl for your own test purposes.

Please Send Booklet "MAKING THE MOST OF THE DIETETIC MARKET WITH SUCARYL"

To:
NAME: _____
(Please print)
FIRM NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____
YOUR TITLE: _____

Here's Sucaryl's current "ad-of-the-month"





You can save a lot of calories by sweetening with Sucaryl

and you can't taste the difference

WEIGHT-WATCHER'S PRUNE WHIP

½ pound dried prunes
1 cup water
1 teaspoon unflavored gelatin
1 tablespoon water
4 egg whites
2 teaspoons lemon juice
2 teaspoons Sucaryl solution

Simmer prunes in water until soft. Pit prunes, force through sieve and add juice. Soften gelatin in 1 tablespoon water; dissolve over hot water. Beat egg whites until foamy; gradually beat in gelatin, lemon juice and Sucaryl. Fold in prune pulp. Chill. Makes 6 servings.

Note: For topping, combine ¼ cup nonfat dry milk solids, ¼ cup ice water and ½ teaspoon Sucaryl in small bowl. Beat at high speed until it reaches the consistency of whipped cream.

Sucaryl makes it easier for you to watch your weight . . . by giving you wholly natural sweetness without bitter aftertaste, without one single calorie.

You use Sucaryl practically anywhere you would sugar . . . in coffee, tea or any other drink . . . on fruits and cereals. Cook with it, bake with it, any Sucaryl-sweetened dish tastes just like its sugar-sweetened twin. Sucaryl, of course, is for anyone sensibly counting calories, and for those who cannot take sugar. Your drugstore has Sucaryl in tablets or solution. Low-salt diets call for Sucaryl Calcium. Abbott Laboratories, North Chicago, Illinois and Montreal, Canada. Abbott

Get your new Sucaryl Recipe Book—free at your drug store.

Sucaryl®

Non-Caloric Sweetener—No Bitter Aftertaste

Corn must be harvested fast and regularly once canning operations start in order for plant to hold down labor and overhead costs.

Three Ways to Reduce Costs in Corn Canning Plants

Study of seven corn plants finds weaknesses in coordination rather than in individual operations

A case of corn cost $2.59 to can in one plant during 1952. In another plant in 1953 it cost $3.72 to pack a case of corn.

What caused this difference? A report recently issued by the Farmer Cooperative Service of the U.S. Department of Agriculture provides detailed cost figures in an attempt to find the answer.

Seven plants are studied. Two of them are cooperatively owned. Five are located in the Midwest and two in the Middle Atlantic States. The study covers the 1952 and 1953 canning seasons.

1952 was a year when the corn pack was large (38 million cases) the carryover small (428,000 cases) and the canning outlook favorable indeed. By the next year the carryover had grown (2.3 million cases) the pack was smaller (36 million cases), the Korean war had just come to an end, labor costs were a little higher and the price outlook was not so rosy.

In the USDA report, similar cost figures from different plants are not always comparable. There are big differences between plants in costs of similar items. Some of these differences are easily explained. In one of the cooperative plants the cost of corn was unusually high the first year and low the second year. Actually, the profits of the plant were returned to the growers on the basis of delivered tons of corn the first year and a loss was subtracted from the corn price the second year.

To make comparisons easier all costs were reduced to terms of cost per case of 24 No. 303 cans.

This method brings out four important aspects of cost. In their report, Edward C. Collins and Job K. Savage, Jr., note that, "Analysis indicated canners can make substantial savings by increase in (a) annual volume, (b) daily volume, (c) case yields per ton of raw product and (d)

	Plant I	Plant II	Plant III	Plant IV	Plant V	Plant VI	Plant VII
1952							
Raw product	$0.630	$0.858	$0.725	$0.645	$0.676	$0.727	$0.605
Acquisition	.055	.034	.227	.071	.149	.137	.068
Direct labor	.249	.295	.266	.296	.292	.310	.263
Indirect labor and superintendence	.054	.036	.099	.029	.082	.137	.116
Processing	.880	.866	.914	.846	.939	.882	.840
Shipping and labeling	.179	.138	.107	.135	.219	.141	.151
Selling	.198	.091	.224	.197	.215	.455	.251
General plant overhead	.351	.201	.308	.288	.306	.487	.295
Total	2.596	2.519	2.870	2.507	2.878	3.276	2.589
1953							
Raw product	$0.694	$0.372	$0.697	$0.639	$0.696	$0.869	$0.499
Acquisition	.230	.023	.092	.091	.088	.147	.155
Direct labor	.281	.303	.296	.333	.348	.343	.255
Indirect labor and superintendence	.032	.055	.075	.036	.114	.183	.119
Processing	.863	.918	.909	.879	.912	.937	.775
Shipping and labeling	.155	.130	.114	.152	.285	.120	.138
Selling	.177	.150	.176	.213	.198	.461	.244
General plant overhead	.363	.348	.286	.367	.377	.660	.300
Total	2.795	2.299	2.645	2.710	3.018	3.720	2.485

Costs of seven canning plants are listed on the basis of cost of packing one case of 24 No. 303 cans.

Summary of Organization, Value, Capacity and Production of Plants.

Plant I: Average control of field crops; midwest co-op; book value, $100,000; 22 huskers; corn pack, 1952, 76,998 cases; 1953, 109,563.

Plant II: Average control of field crops; midwest co-op; book value, $160,000; 22 huskers; corn pack, 1952, 245,091 cases; 1953, 132,438.

Plant III: Maximum control of field crops; midwest corporation; book value, $140,000; 24 huskers; pack, 1952, 225,176 cases; 1953, 231,235.

Plant IV: Maximum control of field crops; midwest corporation; book value, $70,000; 10 huskers; corn pack, 1952, 141,552; 1953, 117,382.

Plant V: Minimum control of field crops; mid-Atlantic corporation; book value, $250,000; 34 huskers; pack, 1952, 151,454; 1953, 143,852.

Plant VI: Minimum control of field crops; mid-Atlantic corporation; book value, $50,000; 14 huskers; pack, 1952, 62,099; 1953, 53,621.

Plant VII: Maximum control of field crops; midwest corporation; book value, $40,000; 12 huskers; corn pack, 1952, 159,358; 1953, 145,597.

uniformity of raw product flow to the plant."

Costs figure emphasize the importance of these aspects and point to three methods for reduction:

Crop Control

1. Watch the costs of the raw product, but don't economise if it means loss of control of the crop.

Plants that keep strict control of the field production from time of seeding until delivery start out with a strong advantage in cost reduction. The corn itself is a major cost. It amounts to 22-26% of the total cost of producing a case of corn. In 1952, the cost varied from $17 to $24 a ton in the five plants that could be compared. The highest cost was approximately 44% higher than the lowest cost.

The initial cost cannot always be controlled. Corn prices reflect differences in weather and differences in the strength of competition for corn acreage. But because high-yielding corn generally costs more than low-yielding corn, the difference is less when the cost of raw product is figured on the basis of a case of No. 303 cans. The highest cost among the five comparable plants (not the co-operatives) was 72.9 cents and the lowest 57.4 cents. The higher cost is only 27% above the lower cost.

Another important cost comes in acquiring the corn. However, many costs are lumped into this category from field machinery to fertilizer. One plant figured an unprofitable experience in raising its own corn as part of the cost of acquisition. Another plant appears to have switched from hand snapping to mechanical harvesting during the two seasons.

Oddities such as these make comparisons difficult. The additional cost to keep close control over acreage is not discernable in the figures. Plants that keep close control over the crop have acquisition costs from $2 to $7 a ton in 1952; costs in plants with less control range from $1 to $5 a ton.

While there are no apparent savings in buying corn, the effects of close control over crops are far-reaching. They show up in other savings.

Coordination with Crop

2. Keep plant operations coordinated with field operations.

One of the places where money will be saved is in direct labor costs. Another is in overhead. Coordination between field and plant will affect both.

There is some question whether the most elaborate scheduling of crops, planting dates, fertilization and spray programs will be of any benefit. The crops will still be subject to the whims of the weather. But a comparison of the seven plants in the study shows evidence that the plant schedule is more orderly when someone is concerned with the crops.

Also affecting costs is the volume at the beginning and the end of the season. A plant that "works in" to a pack and "tapers off" at the end is showing a lack of coordination that is apparent in the cost figures. Plants with better control of their crops have better coordination in plants.

A comparison of the daily average cases (production) divided by the number of huskers (capacity) gives an index figure to show how close to capacity the plant averaged during the season.

Average capacity (cases daily per husker)	1952	1953
3 plants with maximum control over acreage	380	388
2 plants with average control over acreage	251	271
2 plants with minimum control over acreage	136	123

What measure can be applied of efficient handling of low-yielding corn? The direct labor costs are affected both by yield and by daily volume. From the figures of the USDA study, separation is impossible. They must be considered together as "coordination."

Here are the comparisons using hours of direct labor to pack a case of No. 303 cans.

Hours	1952	1953
3 plants with maximum control over acreage	.2700	.2700
2 plants with average control over acreage	.2953	.3216
2 plants with minimum control over acreage	.3327	.3928

According to Mr. Collins and Mr. Savage, "Daily plant output seems to have somewhat the same effect on direct labor time as case yields. When the plant has a relatively large supply of raw product on hand, all operations speed up, resulting in more cases processed per hour with the same labor and with less cost.

"A uniform flow of raw product close to the most efficient operating capacity of the plant would do much to reduce direct labor time in the seven plants included in this study."

An improvement in direct labor time would seem to come through better coordination.

Overhead Costs

3. Keep volume high.

The burden of overhead expenses is directly tied to the annual volume of the plant. Weather again will dictate the size of the crop, in spite of the control exercised over the growers. However, in the planning stages the average crop can be aimed at the upper end of the plant capacity.

The fixed costs per case drop steadily with the larger volume, almost without regard to the type of plant. Once the capacity is over the 100,000 case mark the rate of reduction in fixed costs appears to slow up.

Other costs seem less subject to variation. The material costs of packing corn, including cans, condiments, and boxes added up to a substantial 88 cents a case in 1952 and 90 cents in 1953. However, there was little variation between plants. What variations there were could be explained by quantity discounts and purchasing at the opportune times.

Shipping, labeling and selling also showed variations between plants. Labeling direct from the processing line lowered costs. Sales costs would generally reflect sales efforts. Both would be lowered with increased volume.

FOOD PACKER *commends the authors of "Costs of Canning Sweet Corn in Selected Plants." This Marketing Research Report No. 184 of the Farmer Cooperative Service, USDA, was written by Edward C. Collins and Job K. Savage, Jr. All cost figures in the accompanying article are taken from their report. The authors are quoted frequently. Other than this however, the statements which appear in the article are not necessarily those of the authors. The conclusions, based on cost figures from the study, are* FOOD PACKER'S *— Editor.*

"Candy Cane" label will join "Beckman" label on Beckman and Gast Co. products.

Snap Beans Can Be Geared into a Tomato Operation

Ohio canner finds dual lines, mechanical harvesting answer conflict in seasons

By Dennis H. Murphy
Managing Editor

Bob Gast sat behind his desk in the sales office of Beckman and Gast Co., St. Henry, Ohio, and talked about the snap bean line. "There was a certain amount of luck connected with starting the line," he said. The Gast brothers, Robert, William, James and John with their father L. H. Gast added the bean operation in 1952, only a year after the company was reorganized under their ownership.

1952 was a good year to start snap beans, Bob Gast recalled. The national pack was small and bean prices were unusually good. Equipment which had been purchased on the used market was paid for by the beginning of the tomato season.

Now, five years, later Mr. Gast summarized the things that the company had learned about running a bean line in tomato country.

Their experience had shown that the bean line should be run during the full season, it should be operated as a profitable item and the picking end of the operation should be mechanized.

In Ohio, snap beans have never been an important canning item. A few canners have added a line during the past ten years, but not all of them have been successful. There is an overlapping of seasons during the last part of the bean pack and the beginning of the tomato season. The cost and administrative problem of running two sets of field crews and two sets of plant crews has been a factor in discouraging snap beans in tomato canning plants.

When Beckman and Gast started the bean line they installed as inexpensive an operation as possible, and they intended to run it only until the tomato pack started. At that time the plant had a seasonal pack of tomatoes and tomato puree. Since then they have added a tomato juice line and dropped the puree.

They pack a standard cut, field run bean. In 1952 they sold under a "Beckman" label. This year they are starting a "Candy Cane" label.

With the equipment installed and paid for, the next few seasons were "test runs" to see what beans could do. This year there have been lots of changes.

Some new equipment has been added in the line. A new snipper was purchased and a hydro pump replaces a conveyor. The line still is housed on a cement platform outside of the main building. It still has the appearance of a pilot operation, which, of course, it is.

In the field end, two decisions were made this year; first, to run the bean operation for the full season, second, to pick the beans with a mechanical harvester rather than a picking crew.

Weather had its effect on the first decision. Heavy rain, which destroyed up to 25% of the tomato crop in the western Ohio growing area around St. Henry, knocked out up to 50% of the company's bean acreage. Replanting and late harvesting was the only suitable answer.

The decision was supported by five years of cost experience. According to Bob Gast, when a snap bean line is run for part of a season in a tomato plant it can only cover part of the overhead. For a profitable item it must be run for the entire bean season.

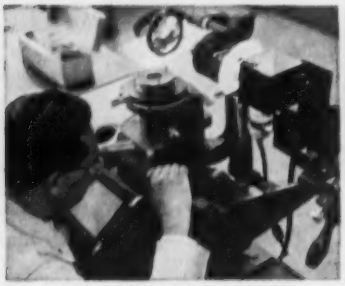
The same reasoning is sound on harvesting, he indicated. For a plant to make money on beans, mechanical harvesting is necessary.

A snap bean is far more expensive than the more conventional dry bean line, if an overhead item is wanted.

(Continued on Page 36)

Bill Gast picks one of the first fields during the 1957 season.

Owens-Illinois Assures You A Complete Packaging Approach



Co-ordinated Research

Pure research into fabrication of glass, *packaging research* into processing and handling methods in customer plants, *market research* into consumer attitudes. All add up to greater packaging value.

Engineered Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.

The Right Container

There's an O-I container to meet your special needs: Duraglas containers; Libbey Safedge packing tumblers or premiums; Kimble Ampuls and Vials; and a variety of plastic containers.

The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.

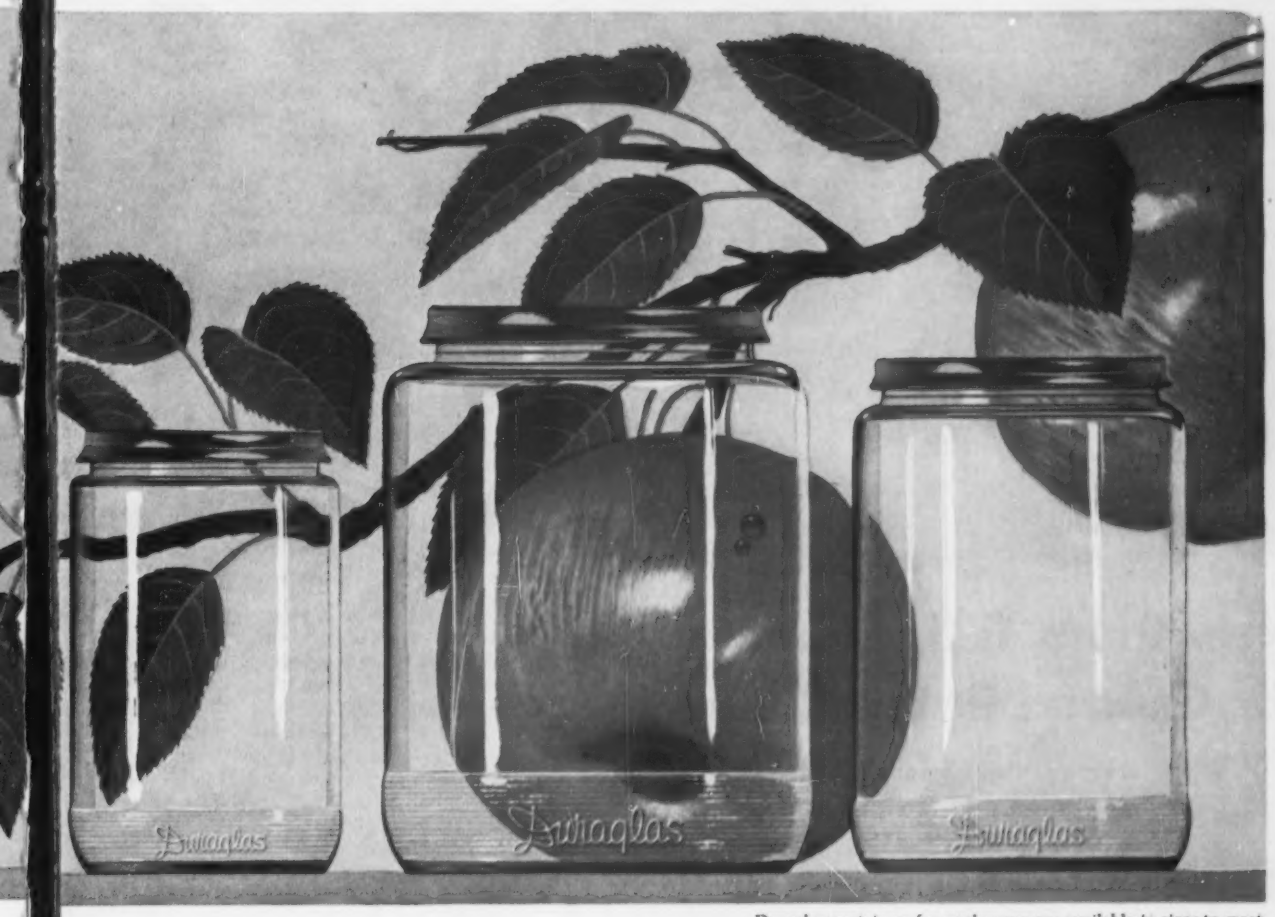
Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse . . . as well as on your own filling line and in transit.

Multiple-unit packs are a sure way to increased applesauce sales!



Duraglas containers for applesauce are available in sizes to meet your marketing needs . . . 8-oz., 15-oz., and 25-oz. capacities.

New applesauce survey uncovers two sales tips and a merchandising idea!

Sales Tip 1: The 1956 survey by the Home Makers Guild of America shows that people who buy applesauce prefer it in glass 2½ to 1!

Sales Tip 2: 32% of applesauce purchases are not planned, but are made on impulse. This vast market can be easily tapped by the unmatched impulse value of glass packaging.

The merchandising idea: 58% of purchasers say they would buy applesauce in convenient multiple-unit packs—preferably of 4 units. In fact, right now about 3 out of 4 purchasers buy more than one unit at a time—so why not use a King-Size Duraglas container to fulfill family needs with greater convenience and economy?

Users prefer glass because it doesn't change the fresh, outdoor flavor of apples, nor add taste of its own. They like, too, the serving ease of Duraglas containers. Tops flip off quickly. The wide-mouth jar makes spooning out portions quick and neat. Snap! the cap is on again, and the container is airtight, flavorproof—to keep leftovers safe and show how much is left for another meal.

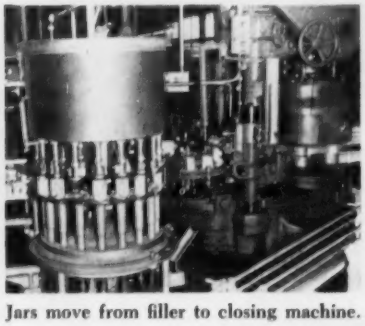
For information on Duraglas containers, get in touch with the Owens-Illinois office nearest you.

DURAGLAS CONTAINERS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

Elaborate inspection table is used for trimming and sorting peeled potatoes for salad.
Photos Courtesy Owens-Illinois Glass Co.

Four kettles prepare bacon.



Jars move from filler to closing machine.

New Plant Is Specialized for Canned Potato Salad

New facilities needed to meet expanded market for J. L. Read Co.

A new plant at Streator, Ill., equipped with modern machinery for processing and packaging mayonnaise style potato salad in glass and tin, and German potato salad in tin has been opened by J. L. Read Sales, Inc.

Costing approximately $250,000, the new line, a model in stainless steel coordination, produces 7,000 pounds of product an hour and 120 containers per minute.

The new Read facilities give the company the production needed for expanding its distribution of mayonnaise style potato salad in glass to Eastern and Southern markets.

Salad Dressings

The new plant has 30,000 sq. ft. used exclusively for producing potato salad items. The original Read plant in Streator produces mayonnaise, sandwich spreads, and various types of salad dressings including Thousand Island, Tartar Sauce, Cole Slaw, French, Fruit Salad, Italian, Russian and Roquefort. The company operates another plant in Franklin, Tenn. for the exclusive manufacture of dressings.

Separation of the potato salad operation from the mayonnaise and salad dressing plant permits specialization on the part of Read's employees, thus producing a uniform, quality product, according to J. L. (Larry) Read, Sr., company president, and his son, Jack L. Read, executive vice president.

Potatoes Are Checked

In the production of its potato salad items, the company uses U. S. No. 1 potatoes which are checked first by Lionel Mills, company food technologist in charge of quality control and product development. After the potatoes reach room temperature, they are placed in the peeling line at a rate of 72 100-pound bags per hour.

Potato salad in glass jars is being introduced in East and South.

The peeling line consists of a washer for pre-rinsing potatoes; a soaker elevator for washing them under temperature; a chemical tank which starts the initial peeling process; a high pressure water washer which removes the skins; a neutralizing tank; inspection table; surge tank; and an even-flow regulator.

Potatoes are moved to the slicer and dicer and then via a proportioning conveyor, which assures constant flow of product, to the processing line.

The processing line consists of a pipe blancher, steam kettles,thermoscrew, unscrambler, piston filler, closing machine, capping machine for glass, and walking beam pasteurizer.

The packing line has a labeler for glass and one for tin a Case packer and case sealer.

Growth Since 1948

Started in August, 1948, without a single customer but with a "host of friends", the Read firm has had unusual growth. During the first year of its operation, the company did approximately $400,000 worth of business. Each year has seen additional growth as the company expanded its product specialty line, its sales force, and its areas of distribution. In 1957, Reads expect to have a total dollar volume in seven figures.

Larry and Jack Read attribute the

(*Continued on Page 38*)

Only this new Bliss Duplex Slitter can save you so much time

You can slash hours off every cutter regrind with this new slitter. That's because the first table retracts almost two feet—lets you get right in at the cutters. Simply attach the motor-driven grinder, then sharpen the cutters in place.

This accessibility also simplifies set-ups and changeovers. And making things even easier is the exclusive design of the bearing housings—they're quickly removed, easily replaced. The side and back gages, too, are easy to reach and adjust, speeding up the entire process.

In short, Bliss' new duplex slitter cuts the heart out of downtime. It saves hours every time you sharpen or set cutters. Whether you slit body blanks or trim and square tinplate, you'll like the accuracy and speed of this most modern of slitters. For complete information write for a copy of our new slitter catalog.

• 100 years of making metal work for mankind

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WILBUR A. GOULD, PH.D.
Ohio State University
Quality Control Editor

Quality Lab Must Take Accurate pH Readings

Selection of proper methods and procedures depends on product under study

The term "pH" is the symbol for hydrogen ion concentration.

The hydrogen ion concentration of a food is a controlling factor in regulating many chemical and microbiological reactions. Because the hydrogen ion concentration expressed in moles is cumbersome, the pH scale as developed by Sorensen is commonly used.

The pH scale ranges from 0 to 14. A neutral solution has a pH of 7.0. A lower scale reading indicates an acid solution and one above 7.0 indicates an alkaline solution. The pH scale is logarithmic rather than linear in character. Therefore, a pH of 5.0 is 10 times as acid as a pH of 6.0 (Table 1).

The pH of a food is important for it is responsible for many of the reactions that take place. For example, a pH between 3.1 and 3.6 is necessary for the production of an accepetable sugar jelly. At a higher pH the jelly will be soft and at a lower reading the jelly will be tough.

Another example of the importance of pH is in foods that contain anthocyanin pigments. If the pH is raised the color will change towards blue and if the pH is lowered, the color will change towards red.

Measurement of pH

The type of microbiological spoilage that a food is subject to is determined in part by the pH. In the so-called low or non-acid foods as vegetables and meats, the principal type of spoilage organisms are bacteria. With acid foods such as most fruits, the usual spoilage organisms are yeasts and molds.

There are two principal methods that are used to measure pH. One is the colorimetric method. This depends on the use of an indicator solution that produces a characteristic color at a given pH. Because there is no one indicator that produces characteristic colors for the entire pH range, it is necessary to use several indicators to cover the entire range from pH 0 to pH 14.

pH Value		
0	10,000,000	
1	1,000,000	
2	100,000	
3	10,000	Acidity
4	1,000	
5	100	
6	10	
7	0	Neutral
8	10	
9	100	
10	1,000	
11	10,000	Alkalinity
12	100,000	
13	1,000,000	
14	10,000,000	

Table 1. The acidity or alkalinity of each pH value is compared with pure water (pH 7.0). For example, pH value of 4.0 is 1,000 times more acid than water.

Most of these indicators are weak organic acids that are capable of existing in two tantomeric forms in equilibrium with each other.[1] When placed in a solution on the acid side of their neutral point the equilibrium will shift to the acid form and the acid color of the indicator will appear.

The reverse is true when the indicator is placed in a solution on the alkaline side of the neutral point. Table 2 lists some of the indicators that are used for pH measurement.

To measure the pH of a solution, the appropriate indicator is added to an aliquot of the solution. The color of this solution is then compared with the color of the indicator at known pH's. The pH of the solution will be the same as that of the indicator standard that has the same color. A serious objection to colorimetric pH determinations is that they are not reliable when used with highly colored samples. The natural color will obscure the color of the indicator.

Electric Potential

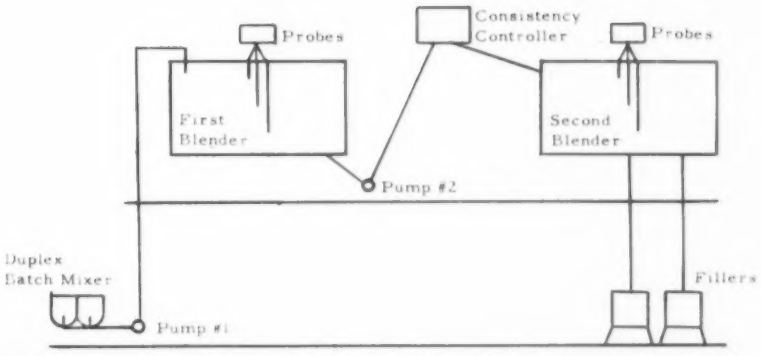
The other method used to measure pH is to measure the electric potential developed between two electrodes when immersed in a solution. There are several types of electrodes that have been developed for this purpose.[2] The most useful type used at this time is the glass-calomel system and an associated potential measuring device. This device measures the voltage developed between the glass electrode and the calomel electrode. The voltage is a measure of the hydrogen ion activity and each change of one pH unit corresponds to a change of 0.059 volts. This developed voltage is measured by balancing the potential of the electrode system against a known potential provided by the interval battery or line voltage and a calibrated slide wire potentiometer. The scale of the electrical meter is calibrated in terms of pH rather than millivolts.

While the glass-calomel system is the one most universally acceptable, it should be remembered that the other electrode systems are useful in certain operations. The choice of electrode system will depend on the use intended and the character of the material being tested.

Preparation of Sample

In order to measure the pH of an unknown it is necessary to reduce the sample to liquid form. In the case of most fruits, extraction of the liquid by means of a hand operated juicer will extract sufficient liquid to make the pH determination. With root and fibrous vegetables, a slurry or puree can be obtained by blending in a

(*Continued on Page 36*)



Pump #1 pumps corn from batch mixers to first blender which has three probes indicating levels. When corn reaches top probe of first blender pump #1 is shut off and cannot start until only the bottom probe is covered with corn. This allows a certain amount of corn to remain in blender and level out batch consistencies. Center probe is desired operating level.

Pump #2 pumps corn from first blender, through consistency controller (at a constant rate for best consistency control) to second blender. When high probe in second blender is reached (in case of filler or closer shutdown) this probe shuts off second pump causing level in first blender to rise to high probe, shutting off pump from batch mixer. When corn in second blender reaches lower probe, pump #2 starts, reducing level in first blender to low probe which starts pump #1 again.

Low probes in blenders must be the only ones in contact with corn to start pumps and high probes covered with corn to stop pumps.

Libby Creams Corn By Automatic Methods

Batch mixer is filled manually, ingredients are added – then it is automatic

The newly purchased plant of Libby McNeill and Libby of Canada, Ltd., Wallaceburg, Ontario, (See August Food Packer) has a new twist in the operation of a corn line. This plant which was built by H. J. Heinz Co. during World War II., has been converted by Libby to supplement the vegetable operation at Chatham, Ont.

Peas, lima beans, red beets, and mixed vegetables are traditional packs for Libby in Ontario. But the corn and pumpkin lines are new.

Both the corn and pumpkin lines have something new in canning plant control systems. Of the two, the pumpkin line is the most nearly automatic. However, the corn line represents two innovations that combine simplicity with definite improvements in production and control methods. First are counters on huskers and cutters, automatic blending of cream style corn after batching.

Intake and Cutting

The usual Libby system of husking and cutting is used. Corn dumped on the receiving dock is elevated to a belt conveyor. The conveyor carries the corn to the line of double husking machines. Husked ears fall on a divided single belt and are carried first to a high-pressure spray washer, then to a trimming table, and finally to the cutters.

Ears are fed into the 16 cutters by hand. For cream style corn, cutters are equipped with scrapers. Cut corn is then conveyed to the silkers.

Control Panel

In the Libby plant a central panel just behind the line of filling machines is connected with a number of operations in each pack.

During the corn pack a double line of counters records each ear that is husked on each of the 16 machines, and each ear that is cut on each of the 14 cutters. With this system Libby is able to simplify piece-work payment.

Cream Style Corn

The Libby plant is able to handle whole kernel corn for both canning and freezing. A key flotation washer is used in the whole kernel line. A blancher on the freezing line has temperature controllers regulated at the central panel.

Three probes in the filler hoppers signal the level of the corn back to the central panel.

On the cream style side, a blending tank feeds into a consistency controller and then into a second blending tank. Both blending tanks are kept at designated temperatures by controllers on the central panel.

The operator measures a specified amount of cut cream corn into the batch mixer. Here ingredients are added as specified by the quality control lab. After mixing, the remainder of the operations are controlled by instrumentation centered at the central panel board. A rotary pump moves the corn from the batch mixer to the first blender, into a second pump, through a DeZurik controller mounted above the second blender. The controller is designed to add water until the mixture reaches a proper consistency.

Consistency control is automatic. A red light on the central panel indicates if the water dilution valve is either wide open or closed – since either case indicates improper consistency.

The cream style corn flows by gravity from the consistency controller to the second blending tank. This tank has temperature recorders on both ends, which allow zone control from the central panel.

The final step is the flow of corn to the fillers.

The panel operator is able to spot trouble on the board by lights on the filler hoppers—empty, filling, half full and full. (see August Food Packer)—by lights on the consistency controller, by readings on the temperature recorders, or by on-off lights on the pumps.

Once trouble shows up he can notify the operator immediately by an in-plant telephone system.

Equipment in the plant of Libby, McNeill and Libby of Canada, Ltd. at Wallaceburg, Ontario:

Huskers, Blancher, Cutters, Blend Tanks, Flotation Washer
.....Food Machinery & Chemical Corp.
Recorders, controllers
.....Taylor Instrument Co.
Consistency controllers
.....DeZurik Shower Co.
Pumps.....Robbins and Myers, Inc.

Better Beans?

The sceptics of french cut snap beans may take another look after reading the experiences of an old line company, in the October issue of

Food Packer

This is the Vapor-Vacuum TEAM

The long-reigning Pry-off and the sensational new Twist-off . . . each doing its own job in its own special way . . . to provide permanent, controlled Vapor-Vacuum protection for foods-in-glass

Today, as always, the job of the Vapor-Vacuum closure line is this:

For any food-in-glass which can benefit from vacuum protection, the Vapor-Vacuum line provides the seal—in the form which best suits the processing method, the marketing conditions, and the cost situation.

THE NEW VAPOR-VACUUM TWIST-OFF CAP has captured its amazing segment of the food market because it delivers a combination of advantages never before available in one cap.

The Twist-off is the first cap in food packaging history which gives the consumer extreme *ease in use* while still assuring *the maximum protective values and manufacturing economies.*

THE OLDER VAPOR-VACUUM PRY-OFF CAP is retaining an important portion of the glass packaging market because it still does several necessary jobs better than any other cap.

The Pry-off cap is the most rugged member of the team. It is the cap which can take processing at 240° or more as no other type of cap can.

What's more, the Pry-off is the cap which

best serves the wide variety of foods packed *in re-use tumblers*—and the exacting needs of *sterile packed fruit juices.*

Either way, everybody wins

The illustrations, here, offer a quick cataloging of applications of the two caps.

For the two groups at the left, the *Pry-off* specification is appropriate.

For a great many others, like those illustrated on the right hand page, the *Twist-off* now dominates. *Wide-mouth Twist-offs* are in general use for pickles, preserves, olives, peanut butter, toppings, apple products and others.

Narrow-neck Twist-offs are now serving a wide range of catsups and sauces, syrups, vinegars, and others.

Either way, food is sure to get its best and most appropriate type of protection via Vapor-Vacuum caps.

9-57

Product of

WHITE CAP COMPANY

A SUBSIDIARY OF CONTINENTAL CAN COMPANY

Cartons are sealed and overwrapped before packing in trays for freezer.

Quality Foods Crack Markets of Nationalistic Tastes

West Coast packer depends on authentic reproduction of flavor, meticulous preparation for sales

A Los Angeles packer of frozen prepared foods has expanded his regular line of frozen pies and meats with special items catering to national tastes. In this case of Henry Kermin, president of Kermin Food Products, the nationalist taste is Mexican foods. But the problems of meeting Mexican food tastes are common to all specialized markets.

Mr. Kermin, who has been in the prepared frozen food business since the early 1940's has been meticulous about quality. His first item, a chicken pie, is still the most popular. He keeps close control on the ingredients to the extent that special machines have been developed which pack the gravy-and-vegetable portion separate from the meat portion.

Without such control, Mr. Kermin points out, it is possible for a customer to get a pie which has no chicken in it, or one with too high proportion of meat.

The success of the Mexican food operation is the result of transferring the same care which has been part of building Kermin quality to the preparation of Mexican foods.

Chicken tacos are assembled by hand after dough is formed automatically and filler is proportioned volumetrically by plunger.

Authentic Recipes

At the present time, the line of Kermin products which supplement the frozen pies and meats include enchiladas and beans, tamales, tacos and chili con carne as well as various dinner combinations of these items.

The foods taste like Mexican foods. So important is this point to Mr. Kermin that he has set his production system to follow authentic Mexican food recipes which originally came from Mexico. The formula is reproduced explicitly except in a few cases where changes had to be made to meet production line methods.

Flavor Ingredients

Another point that Mr. Kermin has carried over to Mexican foods from his meat pie line is the use of monosodium glutamate in gravies and sauces. In the preparation of the filling for the chicken tacos the monosodium glutamate is added just before the end of the cook. Mr. Kermin told *Food Packer* that the use of monosodium glutamate is an important point in the production of a quality food containing meat or vegetables. The supplier for monosodium glutamate is Ac'cent Int.

Kermin Food Products moved into a new plant this year. It is in the center of town. Mr. Kermin uses 25 distributors in Los Angeles. Outside of the city 12 firms distribute Kermin products which are shipped to them by refrigerated trucks

Will Go National

Present distribution is within the state although the new plant is being readied for federal inspection and out-of-state distribution. The line of Mexican foods is distributed through the same channels as the frozen pies and meats. So successful has the line been that Kermin is now the biggest producer of Mexican foods in California.

In the plant Mr. Kermin has supplement standard production equipment with machinery of his own invention. He has perfected equipment

(Continued on Page 36)

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- **merchandising counsel**
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Can Band, the versatile multipack merchandiser, is consumer proven: Easy to pick up, easy to carry, easy to open. Can Band turns single sales into multiple sales and promotes your brand name through maximum billboard panel display. Hand or machine loaded.

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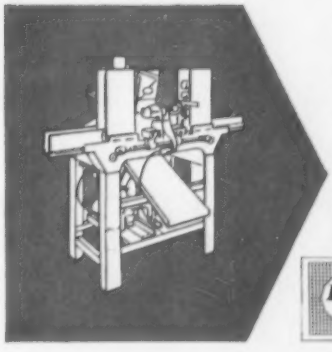

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- packs up to 50 cartons a minute
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- feeds, loads cans automatically
- easy to adjust, maintain, operate

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...by creating impulse sales

BECAUSE 70% of all shopping decisions are made on impulse, the transparent glass container has a tremendous sales advantage. Through its clear, sparkling walls it shows the true color, size, texture and quality of the contents. It affords an exciting and delightful view of the product that stimulates the appetite and the desire to buy. And when Mrs. Housewife likes what she sees she buys on sight—seven times out of ten. Surveys prove that women prefer glass-packed foods. Why not take advantage of this preference? You will move more of your products by doing so.

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more food!

Lancaster, Ohio

Freezing News

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Courtesy Continental Can Co.

Corrugated Shipping Box

A new shipping box for whole frozen strawberries in cans is being used by Growers and Packers Cooperative Canning Co., Inc., of North Collins, N.Y. The new container is constructed with short flaps and slots in the end panels.

Western Spinach Gains

The spring pack of spinach, while lower for this nation, showed substantial increases in the West. According to the National Association of Frozen Food Packers, whose classification only shows the two regions, South-and-East and West, the national production of spinach slipped from 81,442,535 in 1956 to 74,808,622 in 1957.

In spite of this decrease, the production of spinach in the western region (California is the major production state) was raised from 50.4 to 51.6 million lbs., or from 62% to 69%.

Holdings of spinach in cold storage were still high. According to the U.S. Department of Agriculture report, 57,860,000 lbs. were in storage July 31, 1957. A year earlier the figure was 52,024,000, or slightly higher than the 5 year average 1952-56, 51,337,000.

'Grass' Pack Slimmer

The 1957 pack of frozen asparagus is smaller than last year but equal to the average pack for the past five years. This report was made by the National Association of Frozen Food Packers.

There was little change in the production by regions. All were down in proportion to recent production. The package size also showed little change from 1956. Some increase was noted in the 9 oz. package, but the 10 oz. size is still most popular.

year	pounds
1954	25,779,827
1955	28,669,350
1956	37,674,003
1957 10 oz.	17,247,594
other	3,914,717
2½ lb.	8,948,208
	30,110,519

In spite of the smaller pack, the stocks in cold storage as reported by the U.S. Department of Agriculture were still higher than last year. A total of 34,624,000 lbs. were reported as of July 31, 1957. A year earlier the total was 30,718,000. Both totals are well above the July 30 average for 1952-56 of 22,632,000.

Courtesy Reynolds Metals Co.

Whole Green Beans

Whole green beans, are being marketed for the first time by Seabrook Farms Co., Seabrook, N.J. The frozen product is offered in a 9 oz. package which consists of a waxed carton overwrapped with an aluminum foil wrapper. The new item will be marketed through Seabrook Farms' regular distribution outlets east of the Mississippi.

Italian Specialties

Roman Products Corp., South Hackensack, N. J., has given a new look to its line of prepared Italian foods. Roman pizza is reproduced in full color showing the red tomatoes and Mozzarelle cheese on a pastel yellow background.

Ravioli with meat has a red background and ravioli with cheese, a green background.

Retail Food Cases

Temperatures in only 25% of the retail frozen food cabinets were at 0° F. or below. According to a U.S. Department of Agriculture survey, made at the request of the Florida Citrus Commission, the temperatures ranged to 20° F. and above.

Of the 1440 samples, 20% were at 0-5°, 28% at 5-10°, 16% at 10-15°, 7% at 15-20°, and 5% above 20°.

Distributors' Convention

The National Frozen Food Merchandising Convention and Exposition, sponsored by the National Frozen Food Distributors Association, will be held in Chicago, at the Sherman and Morrison hotels, Sept. 8-11. 1,000 registrations from wholesalers and retailers have already been received.

Those attending this convention will have the opportunity to select one of 36 highly successful industry leaders for a personal business consultation. This convention feature will be handled by William M. Walsh, Morrison & McCluan, Inc., Pittsburg, Pa.

The convention program has been tailored to meet the needs of wholesalers and retailers seeking operational advice. A series of clinic rooms have been reserved for this purpose. Group consultations will be held throughout Sept. 10 from 8:30 a.m. to 12:30 p.m. Appointment cards will permit individual interviews throughout Tuesday afternoon and all day Wednesday.

Packers' Exposition

The Conrad Hilton Hotel in Chicago will be headquarters for the National Frozen Food Exposition, Sunday, March 2 to Thursday, March 6.

Machinery, equipment, supplies, and services for producing and transporting will be viewed by potential customers. This exposition will be held coordinately with the annual meeting of the National Association of Frozen Food Packers.

All those who handle frozen food will attend. Packers, warehousemen, wholesalers, truck and rail transportation people, chain and supermarket operators will see the equipment and services displayed.

According to the NAFFP, a number of unsolicited requests for booth space have been received.

a **health plus**
on your label...

helps put **your product** on the table!

fortify your frozen foods with

PFIZER VITAMIN C

● Today's health-conscious consumers will find extra sales appeal in your frozen packs when you include the words "VITAMIN ENRICHED" on your label. This competitive advantage costs you surprisingly little with Pfizer Ascorbic Acid (Vitamin C).

A natural food ingredient, ascorbic acid not only gives vital nutritional value, but also protects fresh flavor and color against oxidation damage...such as "browning" and flavor loss in the case of many types of fruit, or "rusting" in the case of the fatty portions of fish.

If you are primarily interested in protecting your packs against the effects of oxidation, Pfizer also offers new, *low cost Isoascorbic Acid* which has all the antioxidant effectiveness of ascorbic acid U.S.P., but which does not give vitamin fortification.

Write the Pfizer Chemical Sales Division if you would like detailed information on how to use Pfizer Ascorbic Acid and Isoascorbic Acid in processing frozen foods. Build your sales with a health plus on your label and extra protection in your packs!

CHAS. PFIZER & CO., INC., Chemical Sales Division, 630 Flushing Ave., Brooklyn 6, N. Y.
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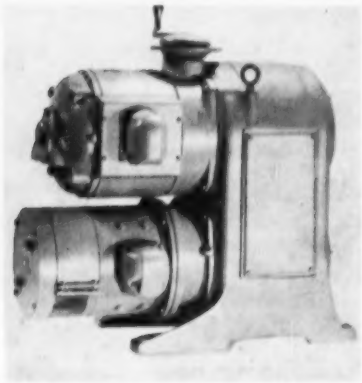


Variable Speed Converter

Any standard NEMA 3-phase A. C. induction motor can now be converted from a fixed-speed motor into a variable speed drive without removing it from its present installation, according to U. S. Electrical Motors Inc., Dept. F, Box 2058 Terminal Annex, Los Angeles 54, Calif.

By connecting the induction motor leads to a new U. S. Varidyne power unit, the motor will receive a variable frequency current generated by the power unit. Speeds are changed at the power unit by means of a handwheel, or remotely by mechanical or electrical remote controls.

Varidyn power units are available to handle a total connected load of from 1 to 50 H. P. with speed variations of up to 5:1. More than one induction motor can be connected to the same power unit, and if they are of the same rating, they will change speeds equally and simultaneously.

Isoascorbic Acid Tablets

Takamine Laboratory, Division of Miles Laboratories, Inc., Dept. F, 139 Arlington Ave., Clifton, N. J., is marketing isoascorbic acid as effervescent tablets to the food industry. Takatabs afford the user a convenient, accurate way to use sodium isoascorbate, an effective antioxidant. The tablets eliminate waste, handling of bulk containers and weighing. Two tablets form approximately ⅞ oz. of sodium isoascorbate in solution. The tablets are packaged 100 to the box, 10 boxes per case.

Hycar Belting

Hycar, a new synthetic rubber, has been adapted to conveyor belting by Globe Woven Belting Co., Inc., Dept F, 1400 Clinton St., Buffalo 6, N. Y. Hycar has natural features of rubber and neoprene, yet is superior in performance. It is resistant to fats and vegetable oils that deteriorate natural rubber and cause neoprene to become spongy and swell.

A 3/64 in. top cover of Hycar combined with a specially woven carcass of lightweight duck assures maximum pliability and resistance to cracking.

The belting stays pliable at 30° to 40° F below zero and maintains stability at 250° F. above zero.

Odorless, tasteless, non-toxic, nonporous and non-contaminating, Globe Hycar belting is available in white for conveying, in cut widths up to 48 inches in 2 to 5 plies. It is made in vision-aiding green in 3 ply for picking and sorting tables.

Safety Solvent

Safety solvent SS-25, manufactured by National Disinfectant Co., Dept. F, 2417 Commerce St., Dallas, Texas, is used to clean, de-wax and de-grease food packaging machinery and electric motors.

It is approximately 25 times safer than carbon tetrachloride, according to the firm, and has no flash at the boiling point. It is a safe replacement for solvents with low MAC's or for inflammable solvents.

SS-25 may be applied by a sprayer, either hand or air, by brushing on, or by using a saturated cloth. It leaves no odor, evaporates rapidly, leaving no residue, is non-corrosive and safe for human skin.

The solvent is packaged in 55-gal. and 35-gal. containers.

Pressure-Vacuum Control

The United Electric Controls Co., Dept. F, 79 School St., Watertown, Mass., has added a new pressure-vacuum control – Type H27A – to its catalog. The unit provides two completely separate switch actions, permitting control of two independent circuits and extreme flexibility of switch arrangement.

The H27A has a calibrated dial and single turn adjustment knob and pointer for making pressure settings. Individual switch adjustments are made by independent hex head screws located inside the enclosure.

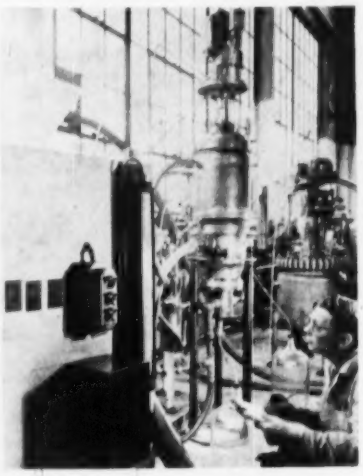
Once established, the span between settings is constantly maintained throughout the range. Wider limits of differential between switches are obtainable.

Eight models are offered in a variety of adjustable ranges between 0 and 180 psi limits, and maximum pressures up to 180 psi.

Stainless Steel Cleaner

Here is a new heavy-duty cleaner for food plant use, manufactured by Oakite Products Inc., Dept. F, 19 Rector St., New York, and designed for cleaning stainless steel equipment.

This new material is a combination of improved wetting-out and lime sequestering properties. It is particularly effective in dispersing hesperidin deposits from citrus processing equipment. Solutions of the cleaner Oakite can be applied by circulation through equipment such as extractors, heat exchangers, pasteurizers, evaporators, or by spraying surfaces of conveyors, floors storage bins, extractor troughs, etc. The alkaline detergent is called Composition No. 162.



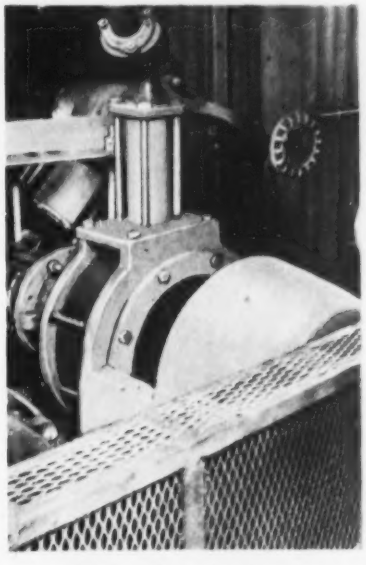
Wiped Film Evaporator

A new evaporator, recently marketed by Pfaudler Co., Dept. F, 1000 West Ave., Rochester 3, N. Y., has great potential in the cencentration field. According to the Pfaudler Co., the wiped film evaporator combines the old concept of the falling film evaporator with a new innovation. In this new design the walls of the still are actually contacted by wipers made of impervious graphite or like materials. The individual wipers are set at an angle so as to direct the flow

downward through the evaporator as well as circumferentially.

Liquid to be distilled is fed in at the top of the evaporator to a holding trough. Four nozzles are directed tangent to the heating surface. As the rotor revolves the liquid is smeared on tangent to the walls to prevent splashing. When the liquid comes down the walls the wipers spread it evenly, forming thin films with high heat transfer rates and short contact time. The more volatile components are evaporated. The condensate collects at the bottom of the condenser and flows out the product outlet. Unevaporated liquid collects and flows out through residue outlet. The vacuum connection at bottom of still can be operated by either a steam jet, or mechanical vacuum pumps.

Tests on the evaporator which took place under 40 pounds of steam, showed that a solution having .47 grams per mm. in the residue was reduced to .000010 grams in distillate.



Graphite Chemical Pumps

Impervite graphite chemical pumps operate at an average maintenance cost of 51¢ per month according to the manufacturer, Falls Industries, Inc., Dept. F, Aurora Road, Solon Ohio. Single stage impeller type centrifugal pumps are constructed of corrosive-resistant graphite. A self-sealing design composed of a rotary and stationary carbon ring is capable of withstanding pressures at 500° F. The corrosive handled in the pump cools the seal and eliminates the need for lubrication or externally located cooling apparatus. The 6 standard models have capacities ranging from 25 gpm at 20 psi head to 200 gpm at 100 psi head.

Ultrasonic Emulsifier

A new line of ultrasonic emulsifiers has been recently perfected by the Sonic Engineering Corp., Dept. F, 146 Selleck St., Stamford, Conn. These machines use the fluid-dynamic forces of the liquids themselves to produce sound waves, instead of generating ultrasonic energy outside the liquids. The liquid to be emulsified is impinged in a steam jet on the edge of a blade. When the blade vibrates at its natural frequency or about 22,000 c.p.s., cavitation occurs continuously in the steam rushing past the blade.

According to the manufacturer the Rapisonic emulsifier pictured above is easier to maintain and costs less than conventional emulsifiers. It consists of a gear-type pump and an ultrasonic head driven by a 2 H. P. motor. With an output up to 350 gallons, it handles emulsions of both high and low viscosity. During sonification, the Rapisonic will not incorporate air. No pre-mix is necessary, for the machine produces a homogenous field. It is easily installed by bolts or clamps to any firm support near the processing vessel.

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Handling COSTS
ABC
PICKING
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Write for brochure on mass production and automation handling methods with wooden picking boxes—no charge.

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Conveyor Hinge Section

A new conveyor hinge section which operates with only 10 pounds of effort has been perfected by the Rapids-Standard, Inc., Dept F, Grand Rapids 2, Mich. This Rapistan hinge incorporates a coil spring counterbalance which reduces the amount of lifting effort ordinarily required to raise a conveyor gate.

The section comes in all widths of Rapistan wheel and roller type conveyors, and consists of a conveyor with a 3 ft. wide gate. The hinge section utilizes a "Special Rapistan" support at the hinge point, and striker arms or hook connectors secure the free end of the gate to the adjoining section of conveyor.

Hinge section requires 21 in. minimum clearance from floor to bottom of conveyor. The stands that support this clearance are available in three sizes offering a range of 21 in. to 51 in. clearance.

Remote Valve Control

A new electrical control for remote valve positioning is made by the Sparton Controls System Division, Dept. F, Jackson, Mich. It offers an exclusive feature of upper and lower valve limit signals plus meter indication of valve position. It operates over leased lines or standard 2-wire ground systems.

Controlled valve position – or other variable dependent on the valve action – is displayed on a 6 in. meter. Color-segments mark the extreme ends of the scale showing positively when the valve is open or closed. The Sparton Val-Con can operate with present motor controllers over a distance of a few feet to many miles.

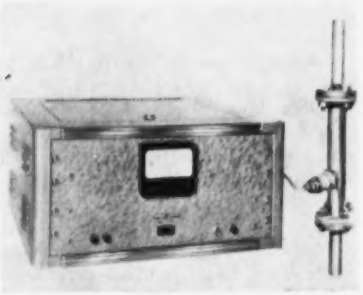
Control unit is housed in a NEMA 1 enclosure, or is available for panel mounting. The remote controller, located at valve site, is also available either in NEMA 1 enclosures or on a framework suitable for inclusion in starter panels. Val-Con has an overall system accuracy of 2%, a repeatability of ½%, and a sensitivity of ¼%.

Water Blancher

A new water blancher, by Rietz Manufacturing Co., Dept F, 441 Folsom St., Santa Rosa, Calif., has features designed to overcome product damage in water blanching. Perforated flights minimize damage as they convey the product forward without pumping water in the same direction. The perforations allow a free flow of water back through the flights. Optimum clearance is maintained between trough and accurately machined flights for the full trough length.

At the discharge end of the blancher, perforated out-curved paddles lift the product onto a draining screen in the discharge chute. The curved design of the paddles prevents product return to the rotating flights and assures that water will not be discharged with the product.

The 24 in. diameter of the perforated flights permits shorter travel and reduces product bruising. Blanching time and temperature is accurately controlled. This compact machine is adaptable for small spaces. Simply constructed, screw-type design is easy to clean. Fractional H.P. motors provide desired speeds for blanching from ½ to 10 minutes.



Mass Flowmeter

Industrial Development Laboratories, Dept F, 17 Pollock Ave., Jersey City, N. J., announces a new model of the Laub Electro-Caloric Flowmeter. It is designed to measure mass flow rates of fluids in laminar flow.

The rate of heat transfer is measured through the boundry layer of a liquid or gas flowing through a smooth bore flowcell. All measuring elements are separated from the fluid by the walls of the flowcell and thus are protected from chemical or mechanical attack. Small flow rates of a few pounds per hour and less can be measured accurately, as well as flow rates of highly viscous materials and other fluids which are impossible to measure with conventional methods.

Model FM 100 operates with a very small wattage imput to the heater of the flowcell and measures the temperature differential between the upstream and downstream sensing element.

The flowcell can be fabricated in stainless steel, copper, monel or any other impervious metal with a ¼ in. diameter or greater.

Antioxidant

Santonox, a non-staining antioxidant for polyethylene plastic, has been accepted by the Food and Drug Administration as safe to use in high-pressure polyethylene films for food packaging.

The compound is reported to be at least four times more efficient than other such compounds now used.

Developed by the Organic Chemicals Division of Monsanto Chemical Co., Dept. F, St. Louis 4, Mo., Santonox protects both high-pressure and low-pressure polyethylene against the degrading effects of heat processing, even in concentration as low as 50 parts per million of plastic, according to the company's new technical bulletin on the product.

Chemically, Santonox is a purified dialkyl phenol sulfide. The compound has been marketed for some time by Monsanto as an antioxidant for rubber under the trademark Santowhite Crystals.

every old crow thinks her babe is Bee-u-tiful

"Mother-Love" sometimes, and quite naturally, rationalizes the poor sales behavior of a food product where flavor and eye appeal may be out-of-step with changes in consumer preferences.

It is important to know the truth about *your* product...it is just as important to know what to do about the truth! May we suggest "Better Check with STANGE and Be Sure."

The **WM. J. STANGE CO.**, *Manufacturers of Seasonings and Food Color, extends to the Food Industry a three-fold service involving Flavor and Color Improvement—Product Development —New Product Suggestions. Any or all three services are available through a Stange representative or by letter.*

BETTER CHECK WITH STANGE AND BE SURE

50-A MICROGROUND SPICE · CREAM OF SPICE SOLUBLE SEASONING · GROUND SPICE
NDGA ANTIOXIDANT · PEACOCK BRAND CERTIFIED FOOD COLOR

WM. J. STANGE CO.

Chicago 12, Ill. · Paterson 4, N. J. · Oakland 21, Calif.

CANADA: Stange-Pemberton, Ltd.—New Toronto, Ontario
MEXICO: Stange-Pesa, S. A.—Mexico City

Litho in U.S.A.

Indicator	pH range	Color
Acid cresol red	0.2 - 1.8	Red-Yellow
Acid meta cresol purple	1.2 - 2.8	Red-Yellow
Benzo yellow	2.4 - 4.0	Red-Yellow
Brom phenol blue	3.0 - 4.6	Yellow-Blue
Brom cresol green	3.8 - 5.4	Yellow-Blue
Methyl red	4.4 - 6.0	Red-Yellow
Chlor phenol red	5.2 - 6.8	Yellow-Red
Brom thymol blue	6.0 - 7.6	Yellow-Blue
Phenol red	6.8 - 8.4	Yellow-Red
Cresol red	7.2 - 8.8	Yellow-Red
Meta cresol purple	7.6 - 9.2	Yellow-Purple
Thymol blue	8.0 - 9.6	Yellow-Blue
Phthalein red	8.6 - 10.2	Yellow-Red
Tolyl red	10.0 - 11.6	Red-Yellow
Acyl red	10.0 - 11.6	Red-Yellow
Parazo orange	11.0 - 12.6	Yellow-Orange
Acyl blue	12.0 - 13.6	Red-Blue

Table 2. Indicators are listed showing both pH ranges and color changes.

Acids	pH Value	Bases	pH Value
Hydrochloric acid	1.0	Sodium Bicarbonate	8.4
Sulfuric acid	1.2	Borax	9.2
Phosphoric acid	1.5	Ammonia	11.1
Sulfurous acid	1.5	Sodium carbonate	11.6
Acetic acid	2.9	Trisodium phosphate	12.0
Alum	3.2	Sodium metasilicate	12.2
Carbonic acid	3.8	Lime (saturated)	12.3
Boric acid	5.2	Sodium hydroxide	13.0

Table 3. pH values of various acids and bases (N/10 solutions).[3]

Quality Control

(*Continued from Page 23*)

mechanical blender or food chopper.

The pH determination can be made directly on the puree where an electrical pH meter is used. When using a colorimetric determination, it is necessary to first filter the puree in order to obtain a solution free of solid particles.

Making pH Measurement

The actual mechanics of making a pH measurement are relatively simple. Using an electrode system, a sample of the unknown liquid is placed in a small beaker, the electrode inserted and the pH measurement made. The adjustments necessary and the operating instructions will vary with the appartus used. Usually concise operating instructions are furnished with the instrument.

When using a colorimetric procedure, the procedure is to place a definite volume of liquid in a calibrated tube and then add a definite amount of indicator. To another tube just the unknown is added. This second tube is aligned in back of the tubes containing the standard indicator solution. This is done in order to compensate for any turbidity or slight amount of color in the sample which would cause a change in the observed color. There are several types of colorimetric pH apparatus available at moderate cost. Any chemical supply house catalog will list several of them.

Interpretation and Results

The pH measurement is a measurement of the free hydrogen (H) ion or hydroxyl (OH) ion concentration (Table 3). In pure solutions of an acid or base, it is proportional to the normal concentration of the acid or base. However, in solutions of fruits or vegetables, this is not the case. Any such solution will contain colloids and buffer salts which will influence the pH reading. For this reason, it is possible to have two solutions with the same pH but with widely different total acid concentrations.

Buffer Effects

For example, in testing strawberry varieties it was found that two varieties had a pH of 3.25, but one had a total acid content of 1.48 per cent acid and the other a total acid content of 1.95 per cent. Because of the presence of buffers in food products, the total acid content does not have as much significance as pH measurements in determining the types of reaction that will take place.

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2. Winton, A. L. and K. B. Winton. "The Analysis of Foods" John Wiley and Sons. New York. 1945. p. 7.
3. LaMotte. The ABC of pH Control. LaMotte Chemical Products Co. Towson, Baltimore, Md.

Snap Bean Line

(*Continued from Page 17*)

An entirely new line would cost around $25,000. In a short season it would be capable of packing only around 50,000 cases.

In spite of the success of his own company, which had the advantages of easier competition and higher prices in 1952 Mr. Gast said, "It begins to look, from our experience at least, a small tomato canner,who wants to add snap bean line will have to go directly into an operation that can support the use of the mechanical harvester.

"This was not true five years ago when we started, but I believe that with average prices, this must be the case."

If the dual plant operation is successful this year, Beckman and Gast Co. plan to install a permanent bean line parallel with the tomato line.

Equipment used in Beckman and Gast Co. plant:

Mechanical bean harvester, bean snipper .....Chisholm-Ryder Co.
Hydro pump.....Scott Viner Co.

Mexican Foods

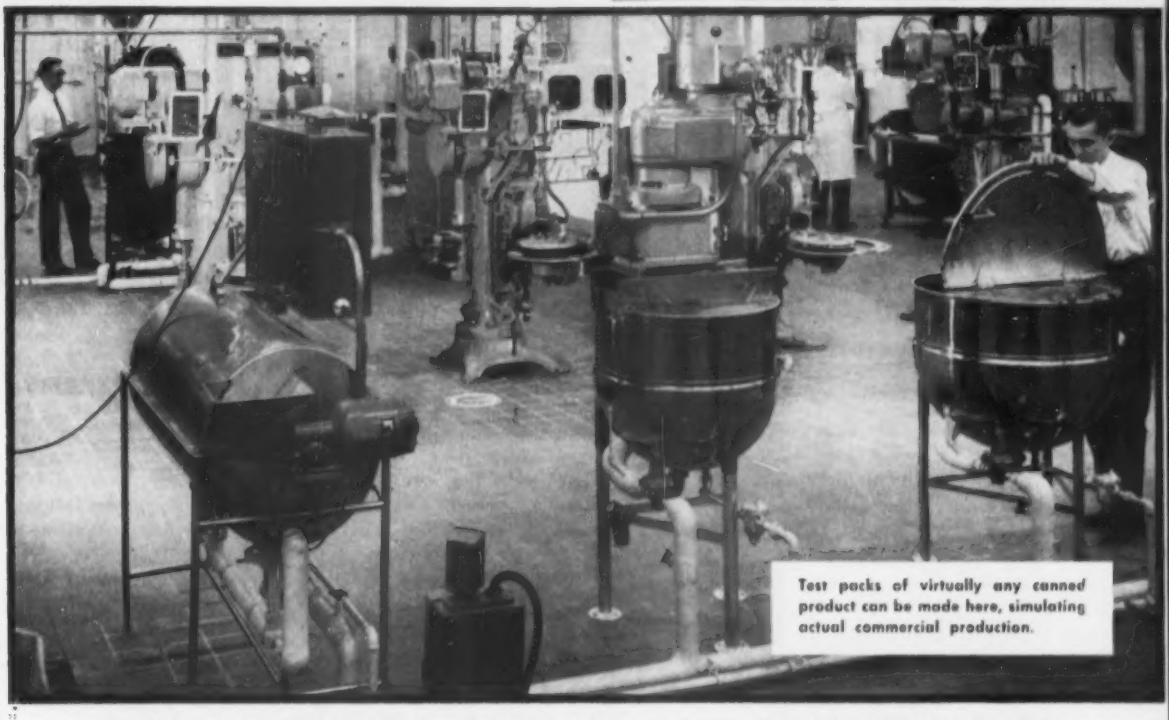
(*Continued from Page 26*)

which regulates portion control, automatically forms pie dough, and speeds up the packing operations so that his frozen pie line requires only 1½ min. from the empty pie plate to the wrapped package. Mr. Kermin's steak forming and breading equipment turns out 4400 breaded steaks an hour.

This versatility with machinery shows up in the operation of the plant. The tacos, as one of the Mexican foods, may be assembled on one to four packing tables in the plant, depending on the requirements of the daily production. In all lines the system is the same. The meat filling is portioned out on the thin corn meal dough. Girls wrap and package them in sulfide-coated board imprinted with the "Kermins" brand. The filled cartons are sealed, overwrapped and stacked on trays ready for freezing in the blast freezer.

The tacos are sold in a ready-to-cook form.

*Report from Continental's new Research Center**



Test packs of virtually any canned product can be made here, simulating actual commercial production.

TEST PACKING SOLVES PROCESSING AND PACKAGING PROBLEMS *BEFORE* THEY HAPPEN

What does Continental Can Company know about *your* packaging and processing problems? Quite a bit. In fact in many cases we get the "kinks" out of your packaging and processing operation before you even know they exist.

At Continental's fabulous research & development center, a huge pilot area is equipped to duplicate actual commercial production of any product made — from soup to nuts — every step of the way. So our recommendations to you are based on solid experience, not merely hypotheses.

Take soft drinks for example. Our engineers tested many compositions of metal before developing a can with the necessary strength for high carbonation, plus a protective enamel lining. Liquid detergents needed special experiment too, until Continental produced a sturdy, non-corrosive can that could be easily marketed.

This pre-testing research can help you too. If you're a Continental customer . . . or would like to be, call your nearest Continental representative. Our experts and engineers are eager to help you solve your packaging and processing problems.

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CONTINENTAL CAN COMPANY

***TOP AWARD WINNER**

For the excellence of its modern, scientific design, Continental's new $7,500,000 Chicago research center has won the honor award of the American Institute of Architects and the Chicago Association of Commerce and Industry.

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Insure Uniform Quality Cooking

DOUBLE-CHECK with COOK-CHEX

When a Cook-Chex is attached to a retort basket... *Anyone* in your plant can double check, at a glance, *two important* facts!

1. **The basket has, or has not, been through the cooking process.**
2. **It has, or has not, been subjected to *proper* cooking conditions.**

These two facts are important to you because they eliminate the usual problems of: a wrong cook schedule, keeping baskets in sequence, and the possibility of "losing" uncooked baskets!

Easy-to-use Cook-Chex signal these essential facts automatically! Cook-Chex, produced with a *purple* chemical ink, turn color to *green* only after your proper cooking conditions have been achieved. Cook-Chex react to precise conditions of temperature, steam and time; and, may be ordered to meet your specific cooking requirements.

Cook-Chex are also excellent as a low cost, permanent record for your cooking-room operations.

Double-check with Cook-Chex to insure uniform quality in your food products. Send for supply of Cook-Chex samples.

ATI COOK-CHEX

Another product by ASEPTIC-THERMO INDICATOR COMPANY

Aseptic-Thermo Indicator Company
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Please send a FREE supply of Cook-Chex for use with a cooking process of _____ degrees F., for _____ minutes. FP-7

Name_____

Position_____

Company_____

Address_____

City_____ Zone____ State_____

Frank Ferington, right, general manager, of I. Miller Pickle, Inc. bids goodbye to A. W. Gustafson, engineer, and locomotive No. 1490 for a job well done.

Locomotive Replaces Pickle Plant Boiler

A RAILROAD locomotive connected to the steam system of the I. Miller Pickle Inc., Brocton, N.Y. kept line operations moving when the plant boiler broke down. Thirty feet of pipe was hooked up between the boiler room and the locomotive which stood nearby on a plant siding. The power generated from the locomotive was sufficient to operate the factory's blanching, capping and pasteurizing operations.

When a hole was blown in the boiler as a result of a faulty tube, the plant's mechanical systems were paralized. Since repairs on the boiler would take at least four days, the Brocton company stood to lose $7,000 due to produce spoilage. It was then that executive Spike Miller came to the plant's rescue by suggesting the switch from boiler to locomotive power.

After a day of searching, a suitable engine was located at Williamsport, Pa., and rushed to the Brocton plant. Within a few hours steam was flowing through the pipes and operations were resumed.

Frozen Food Stocks Still Expanding

The strawberry pack, according to the U. S. Department of Agriculture's Aug. 1 cold storage report, brought freezer stocks within 6% of 1956.

The total stocks of fruit were at a new high of 498 million lbs. for July 31. The figure in itself is not significant. Most of the increase is included in cherries and raspberries. Grape stocks were still up and blackberries increased faster than normal. But most other commodities shown were lower than last year.

Potato Salad Plant

(*Continued from Page 20*)

success of their operation to many factors but chiefly to imagination, quality product, advertising and helping their customers to merchandise and sell Read products.

Equipment used in J. L. Read Co.:
Peeling line, proportioning conveyor
.....A. K. Robins Co.
Glass.....Owens-Illinois Glass Co.
Slicer, dicer.....Urschel Laboratories
Blancher.....Scott Viner Co.
Steam kettles..Lee Metal Products Co.
Thermoscrew.Rietz Manufacturing Co.
Unscrambler...Machinery Service Co.
Piston filler.....Filler Machinery Co.
Closing machine...American Can Co.
Capper.....White Cap Co.
Pasteurizer..Canning Machinery Co.
Case sealer.Elliott Manufacturing Co.
Labelers.....Burt Machine Co.
....and New Jersey Machine Co.

Spotlight

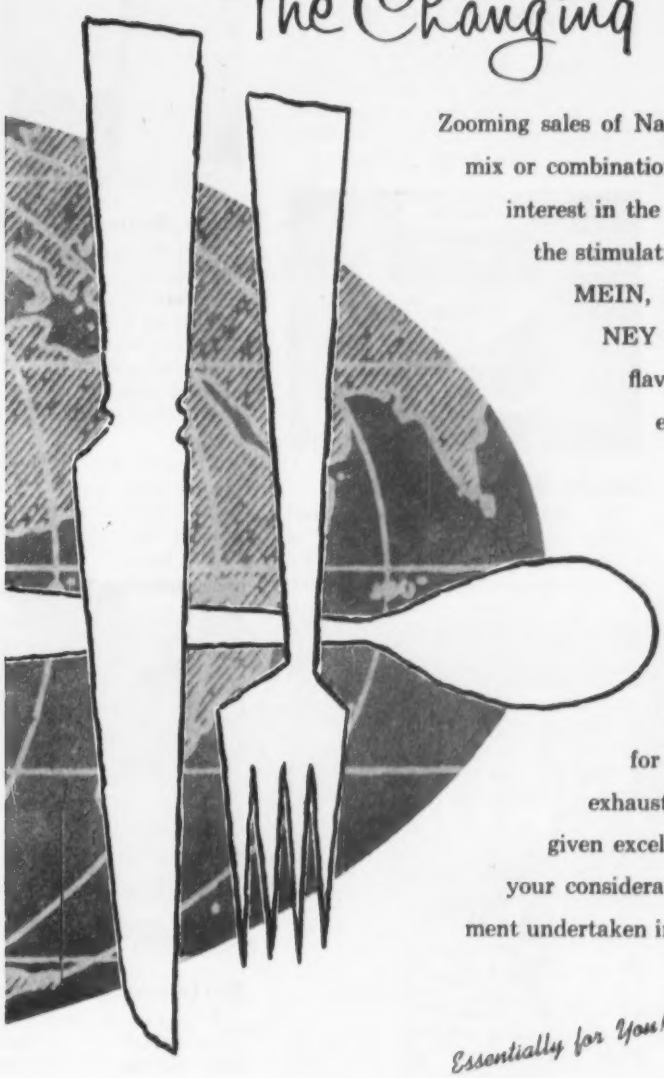
(*Continued from Page 10*)

be compared with objective evaluation of the three vegetables. Once a satisfactory quality scale is developed, the committee will set limits on the various descriptive terms listed in the manual for the product.

NATIONAL SPECIALTIES RATE HIGH

IN

"The Changing World of Food"



Zooming sales of National Specialties in canned, frozen and dry mix or combination form indicate a vastly increased American interest in the culinary delights of other peoples. They like the stimulating and distinctive flavors of PIZZA, CHOW MEIN, BLINTZES, BORSCHT, CURRY, CHUTNEY and ENCHILADAS . . . but here indeed the flavor must be right! If it isn't, despite the lure of exotic names and places, Mrs. Housewife will not buy a second time. The general popularity of National Specialties can often obtain your first sale . . . the second and all thereafter can only be insured by a quality product that lives up to the family's highest taste expectations. The D&O Flavor Laboratories have developed an entire group of Seasonings for National Specialties, for just this purpose. In exhaustive tests with the finished products they have given excellent results. Trail quantities will be sent for your consideration on request . . . and individual development undertaken in the labs on specific problems. Consult D&O.

Essentially for You!

Write for copy of "The Changing World of Food."

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Aromatic Chemicals
Perfume Bases
Flavor Bases
Dry Soluble Seasonings

The Market Place

News of Promotion and Selling

Courtesy Owens-Illinois

Ragu Ravioli

Ragu brand Ravioli with Ricotta cheese in a 32 oz. jar is the latest addition to the line of Italian specialty items packed by Ragu Packing Co., 1680 Lyell Ave., Rochester, N.Y. This product is prepared in the old-world style, and requires heating before it is served. Small spot label on jar utilizes sales appeal of the visual package by permitting complete inspection of the contents.

Products are distributed through food brokers in major market areas east of the Mississippi.

New Baby Food

H. J. Heinz Co., P. O. Box 57, Pittsburgh, Pa., has added another dinner for children, in the "junior food" age, to its growing list of miniature meals.

This new product is described as a combination of short strips of egg noodles with protein-enriched minced beef. Vegetables, including tomatoes, carrots, pimentos, celery, onions and parsley, have been added.

Packed in a 7¾ oz. clear glass jar, this Heinz Junior Dinner, Egg Noodles & Beef, is now available in food stores across the nation. It was tested extensively in five experimental markets. Each label bears an emblem denoting this product as a Heinz "original" Baby Food variety.

Apple Raspberry Sauce

Musselman's "Wonderful Good" Apple Raspberry Sauce, product of C. H. Musselman Co., Biglerville, Pa. is now being distributed in 15 oz. glass jars. Narrow wrap-around labels are designed to utilize the appearance of the product. Apple Raspberry Sauce is prepared from tree ripened apples and strained red raspberries to provide a distinctive flavor combination. The back of the label carries a description of the product and a kitchen-tested recipe.

Courtesy American Can Co.

Dog and Cat Food

Woodard Foods, Inc., Minneapolis, Minn., is making marketing history with what it calls "the first completely new type of pet food in 20 years." This new product "Pupsy Stew" is packed in 15 oz. cans.

This formula combines cubes of beef with vegetables, including carrots, potatoes, onions and others. These are slow-cooked in their own juices. The company states that dogs and cats will readily eat this new kind of food and backs up its claim with a money-back guarantee.

New Bagwell Package

Bagwell Preserving Co., Inc., 1500 Chestnut St., Nashville, Tenn. is introducing a redesigned package. It consists of a pressed tumbler with a four-color wheat design and a new label featuring "Jambo," the Bagwell bear. "Jambo" is the registered trademark developed for all Bagwell products.

This new package was designed for greater sales appeal in retail outlets, as well as to provide consumers with a more attractive tumbler for reuse in the home.

Barbecue Sauce Package

Brooks Foods, Inc., Collinsville, Ill., is marketing a new package for its barbecue sauce. The new decanter style container is being introduced in nine markets around the country, and tested under three labels.

In Chicago, Detroit and Cleveland, the product is packed under the "Brooks" label. In Boston it will be labeled "Brooks Barbecue Cook-Out Sauce." And in Cincinnati, Evansville, Grand Rapids, Nashville and Indianapolis the product will be packed under the "Boone's County" label. The new package introduction is being supported in each market.

Letters

Quartermaster Convention

To the Editor: The Quartermaster Association's annual convention will be held at the Fairmont Hotel, San Francisco on October 3 and 4.

Major General H. R. McKenzie, executive director of the Military Subsistance Supply Agency, will lead the discussions at the two general sessions on the afternoon of the 3rd and the morning of the 4th. These sessions will be conducted to assure audience participation.

The general session on Thursday afternoon will include a presentation on the latest information in the field of radiation preservation by Dr. V. O. Wodicka, the Associated Director of the Food Laboratory of the QM Food and Container Institute. Friday morning will be taken up with a general session on food with a panel on Commissaries. Friday Afternoon's general session will be held under the guidance of Brigadier General R. T. Evans on the subject of PX's.

I am writing this letter to encourage your attendance. If you will send your questions, or suggestions, to me, I will make sure they will be answered during the program. If you prefer to write to General McKenzie, his address is 226 West Jackson Blvd., Chicago 6, Ill.

Alfred J. Stokely
Stokely-Van Camp, Inc.
P. O. Box 1113
Indianapolis 6, Indiana

Our Thanks, Ed.

To the Editor: I read the article on our Company in your August edition with considerable interest. It is very well done, and I believe sets out the essential nature of our operation very closely.

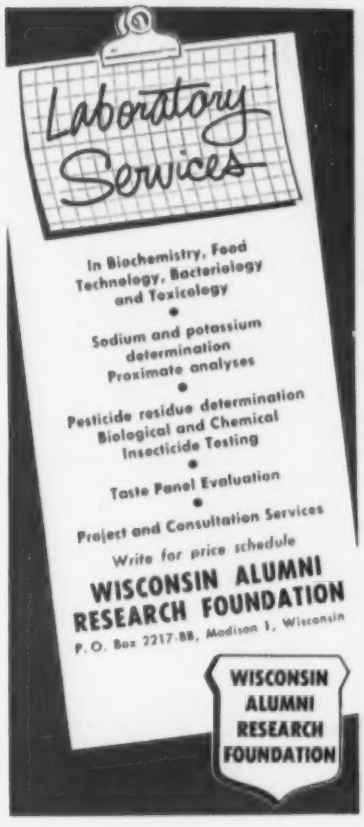
Ed Brown
Michigan Fruit Canners, Inc.
Benton Harbor, Mich.

Mr. Brown is president of the National Canners Association.—Editor

Consultants

To the Editor: Who are the consultants in your field who specialize in planning and developing a completely equipped and operating plant project to its completion. Usually, these men are one-man organizations, known only to the trade, and difficult to reach.

V. N. DeCerchio
Orr and Sembower, Inc.
Reading, Pa.


Laboratory Services
In Biochemistry, Food Technology, Bacteriology and Toxicology
Sodium and potassium determination
Proximate analyses
Pesticide residue determination
Biological and Chemical Insecticide Testing
Taste Panel Evaluation
Project and Consultation Services
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P. O. Box 2217-88, Madison 1, Wisconsin
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PICKLES • POTATOES • PUMPKIN • RELISHES • SAUERKRAUT • SHRIMP • SPINACH • STRAWBERRIES • STRING BEANS • TOMATOES

Washington and You

Army's Food Requirements Will Be Smaller in 1958

The cancellation of the Army's "Intent to Purchase" notices during the first week of August, has been explained. According to the Army, the cancellation was caused by a re-evaluation of the food needs during the coming year. The Army plans a reduction in size, which means reductions in food. New NIP's are being issued with changes in volume and delivery.

Union Trouble?

The McClelland Committee of the Senate, at the moment busy with the Teamsters union and "paper" locals in New York City, has indicated an interest in the forced collection of unloading fees. The racket, found mostly in eastern states, is for unions to charge truck operators an unloading fee from $18 to $20. John Rue, executive secretary of the Tri-State Packers' Association, has suggested that if any of his members had specific examples or information they might want to send them to the committee.

Poultry Products Inspection

The U.S. Department of Agriculture may find itself policing yet another industry. A bill now in conference will provide for compulsory inspection of all poultry products. The inspection program would become available January 1, 1958 but would not become mandatory until January 1, 1959. The inspection program will be on a plant-to-plant basis and inspection may be withdrawn only from plants failing to meet requirements.

Cranberry Bill Meets Opposition

The Department of Justice has entered the argument on the cranberry marketing bill. This was the bill supported by the National Cranberry Association, most of the major farm organizations, and a half-dozen senators from cranberry states. Opposing the bill was the National Canners Association.

This year, after several previous years of successful opposition, the chances of defeating the cranberry marketing bill look poor. But within the past few weeks, the National Canners Association reports a strong statement in opposition from the anti-trust division of the Department of Justice.

Behind this opposition are civil and crimnal anti-trust actions pending against the National Cranberry Association for monopoly of the market.

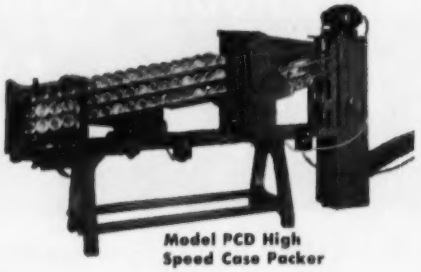
Systemic Sprays for Apple Aphids

Several new insecticide sprays for apple aphids have been tested by the New York State Agricultural Experiment Station. The first reports are good. Not only do the new materials kill aphids present in the trees, but reinfestations are prevented for as long as three weeks.

The insecticides are classed as "systemic" materials, or a type that is taken up by the leaves and spread through plant tissues. They included Demeton, Meta-Systox, Isolan, and G-22870.

BURT "One Stroke" PACKER SAVES YOU TIME AND MONEY

Burt High Speed Case Packers save you time, packing two layers with each stroke. It's the easiest can-handling method available. Just place the case — a Burt Packer fills it with a single stroke.

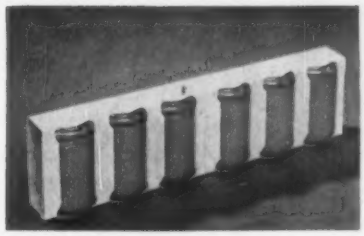


Model PCD High Speed Case Packer

BURT BEATS FLEETING TIME

BURT

BURT MACHINE COMPANY—401 E. Oliver Street—Baltimore 2, Md.



Multiple Cartons

The "Cluster-Pak" system of multi-unit packaging for glass-packed products has been perfected, according to the Atlanta Paper Co., Div. of The Mead Corp., Dept. F, Atlanta 2, Ga.

The multi-pack cartons afford a 3-fold advantage to the retailer, the company said: the product is enhanced with "grab appeal" for impulse buying; sales volume per customer is increased; and up to 75% in handling time is saved by the retailer – two, three or four jars can be priced, stacked and checked out in the time of one.

Corrugated inserted partitions protect the glass to comply with freight shipping and mailing specifications.

The Cluster-Pak Automatic Midget is capable of speeds up to 30 cartons per minute; the Universal, at speeds up to 150 cartons per minute.

Classified Advertising

Count 5 average words per line. Rate 65 cents per line. Minimum charge $2.50. Cash with order, no discount allowed.
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All on canning pickling preserving

1 Charts, tables and formulas are prepared to be taken directly into the quality control laboratory. No extra computation or seeking further details from other sources will be necessary. In preparing specialty products, details are presented on the type of ingredients used, the quantity necessary for a given end volume and the necessary operations to make the combination of ingredients a high quality pack.

2 Photographs and diagrams which accompany the details show latest equipment in action. Specific information is available for products whether they are packed in a metal or glass container, as well as recommended fill for various container sizes.

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Man of the Month

Dr. Zoltan Imre Kertesz

Professor of Chemistry
Food Science and Technology Dept.
New York State Agricultural Experiment Station

A Hungarian scientist, an immigrant, in 1929 began to investigate the relatively new field of enzyme action at the New York Agricultural experiment Station, Geneva, N.Y. The scientist was Zoltan Imre Kertesz, a plant physiologist with a doctorate from the Royal Hungarian University at Debreczen, Hungary.

He began in that year to attack many problems facing the agricultural and food processing industries. He made several important advances in canning technology as the result of his investigations. But the importance of his work probably goes far beyond these improvements.

He brought to his field a first-class mind, a boiling energy and perhaps some luck in starting with an approach that even today is still expanding.

Enzyme Action

Basically, he explored the effects of enzyme action on carbohydrates. He worked with the clarification of grape juice and apple juice with enzymes. He worked with the changes in the chemical composition of peas after shelling and before canning.

Then in 1938 came one of his most spectacular successes. His solution to problems of separation in tomato juice came as the result of investigations on peptic substances. He found that the retention of the natural pectins in the tomato would prevent the separation of the tomato solids from the serum. This would be accomplished by destroying the pectinasterase enzymes with heating, before they could significantly affect the natural pectins.

Because of his interest in pectins and other polysaccharides and his work with the properties of enzymatic action, a large part of his published material has been on tomatoes and fruits.

Recent Efforts

He did some valuable work in the use of calcium salts to retain firmness in the canning of whole tomatoes. He has worked with enzyme actions in peas, grapes, strawberries, apples, snap beans and lima beans. Lately he has been involved in the studies of the effects of radiation on food products. His area has been determining the effects of radiation on certain pectin substances.

The usefulness of any first-rate scientist is rarely limited to the laboratory. But Dr. Kertesz in particular has been called upon many times for services outside of the experiment station. He served with several agencies during World War II including the War Food Administration and the Technical Industrial Intelligence Committee in England, Germany, Austria and France. Since the war he has served as a consultant to the Scientific Office of Technical Services of the U.S. Department of Commerce in 1946-47. He was a director of food research for the United Nation's Food and Agriculture Organization in Ceylon in 1952-53. He was a consultant to an interdepartmental Committee on Nutrition for National Defense, and was a member of the U.S. Nutrition Survey team in Korea, Turkey and Libya.

This work on official commissions has been partly the desire of government agencies for the services of a capable man. But in part it has been the result of Dr. Kertesz' own interest in world nutrition needs.

Dr. Kertesz has been a professor of chemistry at the Cornell University experiment station since 1940.

Born In Budapest

He was born in Budapest in 1903 and became a naturalized citizen in 1935. He was a graduate research fellow at the Biochemical Institute of the University of Stockholm in 1928 and a fellow of the Rockefeller Foundation in 1937-38. He was invited to Australia for lectures by three technical groups during 1948-49.

Dr. and Mrs. Kertesz have long been connected with cultural activities of their community of Geneva, N.Y. They have children, a daughter Vera is married and a son Christopher is now in high school.

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of people are seeing these messages about sugar . . . *and foods containing sugar* . . . in Life, McCall's, Reader's Digest, Sunset, and The New Yorker . . . also in 53 *big-city newspapers* reaching 35 leading U. S. markets.

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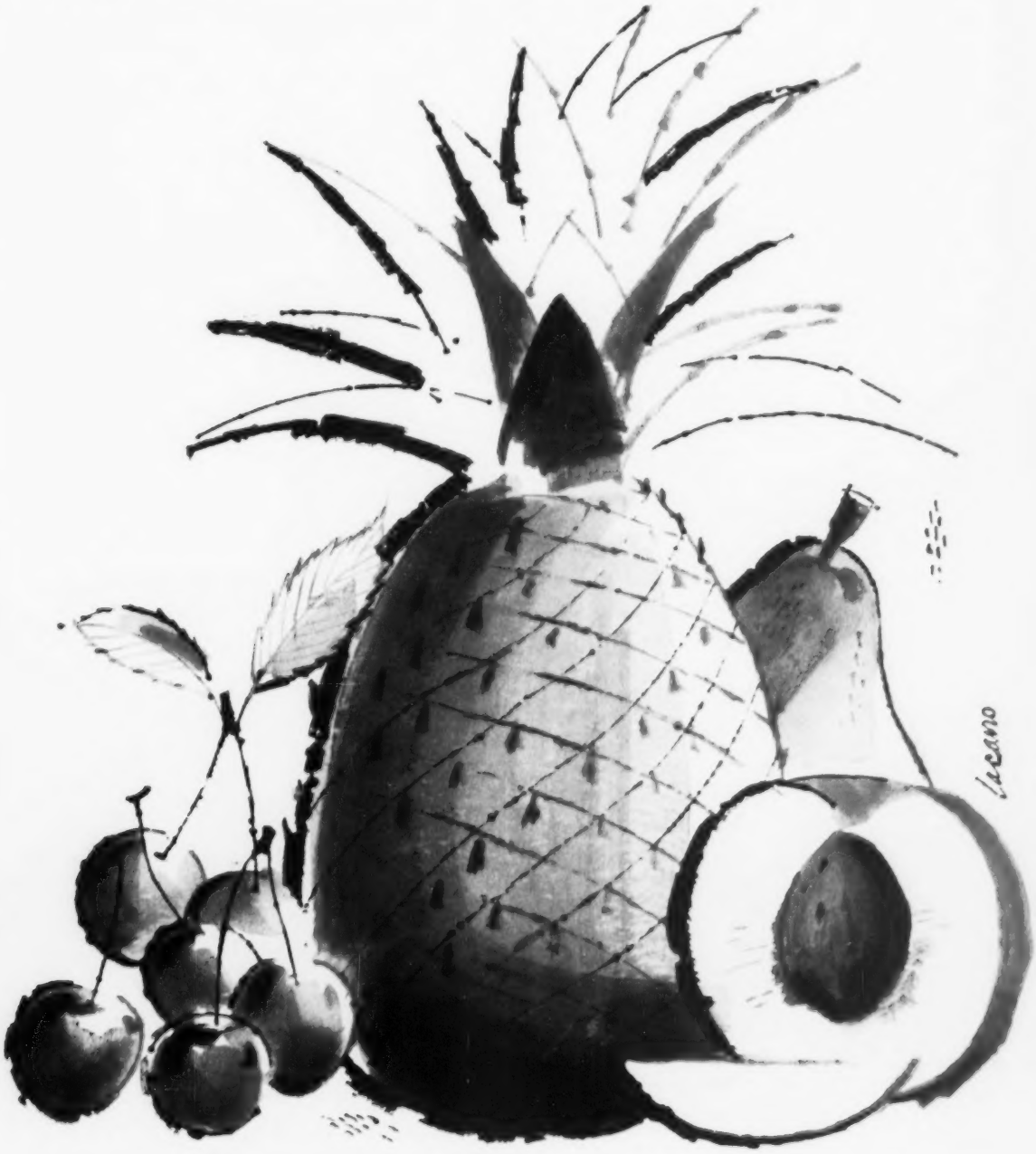

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